



# 2009-2010 Annual Report

MISSOURI DEPARTMENT OF CONSERVATION



*Serving nature and you®*



# Annual Report



*Missouri Department of Conservation*  
*Fiscal Year July 1, 2009 to June 30, 2010*



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FISCAL YEAR 2009-2010

# Annual Report

This summary of the Annual Report highlights the Missouri Department of Conservation's accomplishments and expenditures from July 1, 2009, through June 30, 2010. These accomplishments are based on the nine goals established in *The Next Generation of Conservation*. Not only does this summary highlight the accomplishments of the Department, but it emphasizes that Missourians care about conserving forests, fish and wildlife; that we work with Missourians and for Missourians to sustain healthy forests, fish and wildlife; that we help people discover nature; that conservation makes Missouri a great place to hunt and fish; and that conservation pays by enriching our economy and quality of life.

## Plants & Animals

### **Natural communities**

At the end of FY10 there were 180 Missouri Natural Areas totaling 70,759 acres. These areas represent the best examples of healthy natural communities within the state. During the last fiscal year the Twenty-Five Mile Prairie Natural Area (120 acres) in Polk County was added to the Natural Area System.

### **Partnerships aid birds**

In 2010, the 55 Missouri Bird Conservation Initiative (MoBCI) partner organizations were involved in nine projects across Missouri. MDC grant funds (\$100,500) were leveraged to produce a total contribution of \$345,150 dollars in cash and match for project work. Each of the nine projects involved two to seven partners who have a common goal to provide habitats suitable for a wide range of bird species. Each year MoBCI plays a bigger role in linking Missourians with national and international bird-related initiatives.

### **State Wildlife Grants**

This year is the 10th anniversary of State Wildlife Grants (SWG). Since its inception, SWG has enabled our conservation community to make significant contributions to the restoration and management of habitats and their associated fish, forest and wildlife. Missouri has accomplished more than \$45.8 million in conservation actions since 2002 through SWG and its associated grants.

## Clean Water

### **Stream Stewardship Trust Fund**

The Stream Stewardship Trust Fund is available to restore, enhance and/or protect stream systems and associated

riparian habitats. The program and funds are administered by the Missouri Conservation Heritage Foundation, and MDC applies for grants. In FY10, five projects costing \$707,000 were approved to protect Missouri's stream and riparian corridor.

### **Stream Teams**

Missouri Stream Team grew to 4,115 teams throughout the state. A total of 132,283 volunteer hours were committed to enhance and restore Missouri streams.

### **River basin management**

MDC participated in various interstate working groups to implement ecosystem-based management necessary for the conservation and enhancement of natural and recreational resources of the Missouri, Mississippi and White rivers and their floodplains. MDC helped direct the implementation of \$24.6 million available through the Mississippi River Environmental Management Program (EMP) for biological monitoring and habitat restoration, and \$6.3 million available for planning efforts within the proposed Mississippi River Navigation and Ecosystem Restoration Program. Both programs are funded by the U.S. Army Corps of Engineers.



## Community Conservation

### **Community Assistance**

Through the Community Assistance Program (CAP) and the closely related Corporate and Agency Partnership Program (CAPP), MDC enters into agreements (usually 25-year) with cities, counties, state and federal agencies, businesses, foundations, schools and colleges. Under these agreements, MDC provides fisheries management at existing lakes and ponds and cooperatively develops and maintains facilities for anglers and boaters at lake and stream areas.

MDC has agreements with 117 partners for the cooperative management of 170 public lakes, 42 stream-access areas, four lake-access areas and eight aquatic resource education ponds.

#### ***Volunteer fire departments***

MDC, in cooperation with the USDA Forest Service, provided \$298,894 in grants to 144 volunteer fire departments. These grants help fund protective clothing, equipment and training. We also provided equipment to fire departments through two federal programs. We obtained equipment valued at \$189,205 through the Federal Excess Property Program. The new Fire Fighter Program obtained equipment valued at \$15,515,088.

#### ***Venison donation***

Conservation agents coordinate and support the Share the Harvest program with the Conservation Federation of Missouri, local charitable organizations and local meat processors. Together, these groups have supported the donations of more than 234 tons of meat during the past two years. During FY10, approximately 4,450 hunters donated 205,153 pounds of venison to less-fortunate Missourians.

### **Healthy Forests**

#### ***Forest Resource Assessment and Strategy***

Missouri's Forest Resource Assessment and Strategy (FRAS), was adopted in June 2010. FRAS is an evaluation of conditions, trends, threats and opportunities facing our forests.

FRAS is guided by three important priorities: conserving working forest landscapes, protecting forests from harm and enhancing public benefits from trees and forests. This assessment will be an effective tool for conservation planning and implementation, and integrating priority projects and initiatives with partners and other agencies.

#### ***Wildfire prevention***

MDC endorsed a third-party U.S. Forest Service Hazard Mitigation Grant to the Southwest Resource Conservation and Development Program. This area was hit by the January 2007 ice storm and a subsequent tornado. Heavy wood debris in area forests makes wildfire suppression more difficult and hazardous to firefighters. Educating residents about the increased fire risk and how to properly manage or dispose of damaged trees helps reduce fuels. Fire departments were also compensated for working with communities to perform risk assessments and to apply practices to reduce their fire risk.

#### ***Conservation easement grant***

The USDA Forest Service's State and Private Forestry program awarded a \$190,000 grant to MDC to facilitate the protection

of high-priority privately owned forest land by providing funding to land trusts to secure conservation easements. MDC approved and paid stewardship fees and closing costs on three tracts of land, protecting 1,443 acres located in Stone, Montgomery and Warren counties. Keeping these tracts intact will help to ensure that they remain working forests, provide wildlife habitat to species requiring large blocks of contiguous forest and minimize negative effects of fragmentation (exotic plants, wildfire, insects and diseases, etc.).

### **Outdoor Recreation**

#### ***Fishing***

MDC strives to provide high-quality fishing opportunities for all Missourians. MDC's warm water hatcheries produced enough fish to meet stocking needs in Missouri in 2009. By the end of 2009, 8.9 million fish were stocked in public and private waters, including more than 144,000 keeper-sized fish stocked in 53 urban lakes.

#### ***Archery in schools***

Missouri students in grades 4–12 learn target archery in class in the Missouri National Archery in the Schools Program (MoNASP). The number of schools enrolled in the program has doubled each year since MoNASP began in 2007. There are now 121 schools in the program. More than 20,000 students have participated in MoNASP, which has proven to improve kids' lives not only at school, but at home and in the community. Many schools received reimbursement grants up to \$500 toward NASP-approved archery equipment.

#### ***New hunters and anglers***

MDC and volunteers provided more than 2,400 programs with instruction in hunting, fishing, trapping and shooting sports. More than 126,000 people took part in these programs. We offered about 900 Hunter Education classes, certifying 24,733 students.

### **Conservation Education**

#### ***Master Naturalist***

The Master Naturalist program added another 200 participants to this community-based, volunteer service program that totals 680 people and 11 chapters. Volunteers participated in more than 5,000 hours of advanced training and donated more than 20,000 hours of volunteer service.

#### ***Discover Nature Schools***

In 2010, more than 39,000 Missouri children were connected

with nature through Discover Nature Schools instructional units and grants. Thus far, 104 schools have adopted the middle-school aquatic unit, 109 schools have taught the elementary habitats unit, and 91 have schools engaged students through our Conservation K–3 Field Trip Grant. This year a high school ecology unit, Nature Unbound, was completed, and a kindergarten through second-grade unit is in development. Conservation grants supporting Discover Nature Schools totaled \$134,724.

### ***Citizens enjoying nature***

More than 850,000 visitors explored the trails, programs and exhibits at our conservation nature and education centers throughout the state.

## Landowner Assistance

### ***Financial assistance***

Approximately 328 private landowners received nearly \$520,000 in cost-share funds to implement beneficial habitat-management practices for fish, forest and wildlife resources. The funds helped install 549 individual conservation practices, impacting nearly 9,000 acres.

### ***Partnerships***

MDC developed approximately 41 partnerships with federal, state and non-governmental organizations. These relationships helped us enhance technical and financial assistance and equipment support to landowners. Through the partnerships, we assisted Missouri USDA with developing and applying \$170 million in Farm Bill conservation programs, including more than \$2 million in staff time. We also leveraged staffing, equipment and enhancement funds with conservation-habitat organizations.

### ***Technical assistance***

MDC provided timely and responsive service through 71,886 rural and urban landowner contacts, including 23,228 on-site landowner visits. We also answered 5,371 requests for wildlife nuisance assistance, including 1,000 on-site visits.

### ***Wetland restoration assistance***

Since 1992, MDC has assisted the U.S. Department of Agriculture Natural Resources Conservation Service in restoring critical wetland habitat. To date, Missouri has recorded 982 easements through the Wetland Reserve Program that covers 141,358 acres. These restored wetlands provide critical habitat and store water during floods—alleviating pressure downstream on levees, communities and crops.

## Places to Go

### ***Land acquisition***

Approximately 804 acres of land in six counties were acquired by purchase and donation. Acquisitions included an addition to the recently designated Spring Creek Ranch Natural Area; land lying in close proximity to Hickory Canyons and Pickle Springs natural areas containing glade and woodland habitats; and land providing habitat for prairie-chickens and grassland wildlife.

### ***Land management***

MDC has maintained a high level of active management in the past few years on MDC lands—especially for quail and grassland birds. During FY10, MDC staff conducted habitat management activities on more than 200,000 acres of public land with an additional 95 miles of edge habitat. Staff spent more than 423,000 hours department-wide on conservation area and equipment maintenance.

### ***Forest Best Management Practices***

Implemented and maintained soil and water conservation Best Management Practices (BMPs) for all forest-management practices on conservation areas. MDC monitors and documents BMP compliance on all MDC timber sales. In addition, approximately 10 percent of these sales are audited each year. In FY10 we reviewed 67 sites on 6,623 acres for proper BMP implementation and effectiveness.

## Accounting for Department Operations

### ***Listened to Missourians***

We conduct a variety of scientifically sound, unbiased and representative efforts each year in an effort to understand public opinions, expectations and recreation participation. This information guides decisions about regulations and fish, forest and wildlife management. In FY10 there were 26 activities that involved 66,752 people. These included surveys, focus groups, public meetings and ombudsman contacts.

### ***Forestry technical-training academy***

The MDC forestry-training academy provides a consistent standard of training to new forestry employees. During FY10, four academy training courses were offered, with 122 students in attendance.

### ***Internal audits***

Internal auditors issued five internal audits to ensure that public funds were expended in a responsible manner. There were no major findings.



# What the Money Bought—Fiscal Year 2010

**County Assistance Payments—\$1,476,299** Included payments to Missouri's counties for levee and drainage district taxes, forest cropland payments, payments in lieu of real estate taxes and county aid road trust payments. Since 1980, more than \$14.48 million has been paid to Missouri counties in lieu of real estate taxes.

**Capital Improvements—\$18,865,390** Work included fish hatchery improvements, river access development, wetland renovations, shooting range construction, nature center improvements, land acquisition transactions and renovation and repair of facilities statewide.

**Fisheries—\$12,712,809** Maintained and improved sport fish populations, aquatic biodiversity and aquatic habitats. Managed 933 impoundments and stream areas for public fishing, and provided stream and lake management assistance to 7,204 private landowners. Stocked approximately 9.7 million fish in public lakes and streams.

**Forestry—\$16,158,171** Fostered a healthy and growing forest resource. Examples include distributing about 3.8 million seedlings for planting to 9,700 landowners, provided forestry assistance on more than 61,000 acres of private land and to more than 200 municipalities, managing 438,700 acres of public forestland, monitoring insect and disease threats and facilitating development of the state's forest industry.

**Wildlife—\$16,953,315** Worked toward ensuring wildlife populations are in harmony with habitat and human enjoyment. Managed more than 525,000 acres of public land and implemented programs to maintain and restore natural communities and wildlife diversity across Missouri's landscape.

**Outreach and Education—\$14,796,239** Sustained Missourians' connection to the outdoors through more than 1 million visitors to conservation nature centers and shooting-range/outdoor-education centers, nearly 500,000 subscribers to the *Missouri Conservationist* magazine, Web-based information, grants to schools exceeding \$200,000, conservation curriculums for schools, outdoor skills programs and hunter education.

**Private Land Services—\$6,658,121** Helped private landowners to achieve long-term natural resource conservation objectives. Provided service through 31,400 rural and urban landowner contacts; affected 280,155 acres through technical assistance to landowners; provided habitat management workshops to 40,486 attendees; assisted USDA with enrolling 90,000 acres of cropland reflooding in the Migratory Bird Habitat Initiative; and assisted 5,607 private landowners in controlling nuisance wildlife.

**Protection—\$14,845,064** Paid for law enforcement in every county as well as resource management, information, education and public service contact activities conducted by conservation agents who directly contacted more than 660,000 people. Coordinated the Share the Harvest Program through which 4,450 deer hunters donated 205,153 pounds of venison to less-fortunate Missourians. Conservation agents, along with 1,800 volunteer instructors, conducted 945 hunter education classes, certifying nearly 30,000 students.

**Resource Science—\$11,455,046** Provided the science-based information needed to effectively manage Missouri's natural resources. Resource Science monitors the status of Missouri's fish, forests, plants and wildlife, recommends conservation actions, evaluates these actions and reports the results. In addition to surveys of fish and wildlife, tens of thousands of Missourians were contacted to determine their outdoor activities and opinions about conservation programs.

**Regional Public Contact Offices—\$2,911,354** Provided regional public contact offices.

**Administrative Services and Human Resources—\$26,582,346** Paid for human resources, hunting and fishing permit point-of-sale system, fiscal services, distribution center, print shop, fleet management, vehicle and equipment maintenance centers and information management and technology. Also includes other agency appropriations, Department-wide equipment and other essential services.

**Design and Development—\$11,757,655** Provided engineering, architectural, surveying and construction services for conservation programs and maintenance of conservation areas and facilities.

**Administration—\$4,157,143** Paid for audits, legal counsel and the coordination of strategic planning, federal reimbursement administration, environmental policy development, cultural resource reviews, public involvement and river basin management.

## RECEIPTS

Conservation Sales Tax .....	\$93,854,189
Permit Sales .....	\$32,517,080
Federal Reimbursements .....	\$21,475,595
Sales and Rentals .....	\$7,047,300
Other Sources .....	\$2,402,727
Interest .....	\$512,827
Total Receipts .....	\$157,809,718

## DISBURSEMENTS

County Assistance Payments .....	0.92%
Capital Improvements .....	11.84%
Fisheries .....	7.98%
Forestry .....	10.14%
Wildlife .....	10.64%
Outreach and Education .....	9.29%
Private Land Services .....	4.18%
Protection .....	9.32%
Resource Science .....	7.19%
Regional Public Contact Offices .....	1.83%
Administrative Services & Human Resources .....	16.68%
Design and Development .....	7.38%
Administration .....	2.61%

## MISSOURI STATE BUDGET

Health & Social Services .....	38.5%
Education .....	27.2%
Government Services .....	20.6%
Transportation .....	10.4%
Natural & Economic Resources .....	2.7%
Conservation .....	0.6%
<i>MDC represents less than 1% of the total state budget</i>	
Total State Budget .....	\$24,880,542,354

# Missouri State Constitutional Language

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**Section 40(a). Conservation commission, members, qualifications, terms, how appointed—duties of commission—expenses of members.**—The control, management, restoration, conservation and regulation of the bird, fish, game, forestry and all wildlife resources of the state, including hatcheries, sanctuaries, refuges, reservations and all other property owned, acquired or used for such purposes and the acquisition and establishment thereof, and the administration of all laws pertaining thereto, shall be vested in a conservation commission consisting of four members appointed by the governor, by and with the advice of and consent of the senate, not more than two of whom shall be of the same political party. The members shall have knowledge of and interest in wildlife conservation. The members shall hold office for terms of six years beginning on the first day of July of consecutive odd years. Two of the terms shall be concurrent; one shall begin two years before and one two years after the concurrent terms. If the governor fails to fill a vacancy within thirty days, the remaining members shall fill the vacancy for the unexpired term. The members shall receive no salary or other compensation for their services as members, but shall receive their necessary traveling and other expenses incurred while actually engaged in the discharge of their official duties.

Source: Const. of 1875, Art. XIV, Sec. 16 (as adopted November 3, 1936). (Amended August 8, 1972)

**Section 40(b). Incumbent members.**—The members of the present conservation commission shall serve out the terms for which they were appointed, with all their powers and duties.

**Section 41. Acquisition of property—eminent domain.**—The commission may acquire by purchase, gift, eminent domain, or otherwise, all property necessary, useful or convenient for its purposes, and shall exercise the right of eminent domain as provided by law for the highway commission.

Source: Const. of 1875, Art. XIV, Sec. 16.

**Section 42. Director of conservation and personnel of commission.**—The commission shall appoint a director of conservation who, with its approval, shall appoint the assistants and other employees deemed necessary by the commission. The commission shall fix the qualifications and salaries of the director and all appointees and employees, and none of its members shall be an appointee or employee.

Source: Const. of 1875, Art. XIV, Sec. 16.

**Section 43(a). Sales tax, use for conservation purposes.**—For the purpose of providing additional moneys to be expended and used by the conservation commission, department of conservation, for the control, management, restoration, conservation and regulation of the bird, fish, game, forestry and wildlife resources of the state, including the purchase or other acquisition of property for said purposes, and for the administration of the laws pertaining thereto, an additional sales tax of one-eighth of one percent is hereby levied and imposed upon all sellers for the privilege of selling tangible personal property or rendering taxable services at retail in this state upon the sales and services which now are or hereafter are listed and set forth in, and, except as to the amount of tax, subject to the provisions of and to be collected as provided in the “Sales Tax Law” and subject to the rules and regulations promulgated in connection therewith; and an additional use tax of one-eighth of one percent is levied and imposed for the privilege of storing, using or consuming within this state any article of tangible personal property as set forth and provided in the “Compensating Use Tax Law” and, except as to the amount of the tax, subject to the provisions of and to be collected as provided in the “Compensating Use Tax Law” and subject to the rules and regulations promulgated in connection therewith.

(Adopted November 2, 1976)

**Section 43(b). Use of revenue and funds of conservation commission.**—The moneys arising from the additional sales and use taxes provided for in section 43(a) hereof and all fees, moneys or funds arising from the operation and transactions of the conservation commission, department of conservation, and from the application and the administration of the laws and regulations pertaining to the bird, fish, game, forestry and wildlife resources of the state and from the sale of property used for said purposes, shall be expended and used by the conservation commission, department of conservation, for the control, management, restoration, conservation and regulation of bird, fish, game, forestry and wildlife

resources of the state, including the purchase or other acquisition of property for said purposes, and for the administration of the laws pertaining thereto, and for no other purpose. The moneys and funds of the conservation commission arising from the additional sales and use taxes provided for in S 43(a) hereof shall also be used by the conservation commission, department of conservation, to make payments to counties for the unimproved value of land for distribution to the appropriate political subdivisions as payment in lieu of real property taxes for privately owned land acquired by the commission after July 1, 1977, and for land classified as forest cropland in the forest cropland program administered by the department of conservation in such amounts as may be determined by the conservation commission, but in no event shall amount determined be less than the property tax being paid at the time of purchase of acquired lands.

Source: Const. of 1875, Art. XIV, Sec. 16. (Amended November 2, 1976) (Amended November 4, 1980)

**Section 43(c). Effective date-self-enforceability.**—The effective date of this amendment shall be July 1, 1977. All laws inconsistent with this amendment shall no longer remain in full force and effect after July 1, 1977. All of the provisions of sections 43(a)–(c) shall be self-enforcing except that the general assembly shall adjust brackets for the collection of the sales and use taxes.

(Adopted November 2, 1976)

**Section 44. Self-enforceability-enabling clause-repealing clause.**—Sections 40–43, inclusive, of this article shall be self-enforcing, and laws not inconsistent therewith may be enacted in aid thereof. All existing laws inconsistent with this article shall no longer remain in force or effect.

Source: Const. of 1875, Art. XIV, Sec. 16

**Section 45. Rules and regulations-filing-review.**—The rules and regulations of the commission not relating to its organization and internal management shall become effective not less than ten days after being filed with the secretary of state as provided in section 16 of this article, and such final rules and regulations affecting private rights as are judicial or quasi-judicial in nature shall be subject to the judicial review provided in section 22 of article V.

**Section 46. Distribution of rules and regulations.**—The commission shall supply to all persons on request, printed copies of its rules and regulations not relating to organization or internal management.

# The Conservation Commission and Director

In 1936, the people of Missouri, through the initiative petition process, placed on the ballot and passed language that would create a non-political Conservation Commission with broad authority. The Conservation Commission is vested by the state constitution with responsibility for proper management of the state's fish, forest, and wildlife resources. The four Conservation Commissioners are appointed by the Governor. Their term of office is six years. The Commission is also responsible for hiring the Director.



**Mr. Don C. Bedell**  
Sikeston  
**Term:** 7/30/2009 to 7/1/2015  
**Party Affiliation:**  
Republican



**Mr. Don R. Johnson**  
Festus  
**Term:** 7/18/2007 to 6/30/2013  
**Party Affiliation:**  
Democrat



**Mr. William F. McGeehan**  
Marshfield  
**Term:** 7/11/2005 to 6/30/2011  
**Party Affiliation:**  
Republican



**Mrs. Becky L. Plattner**  
Grand Pass  
**Term:** 8/7/2007 to 6/30/2013  
**Party Affiliation:**  
Democrat

## Director



**Mr. Robert L. Ziehmer**

## Our Mission

*To protect and manage the fish, forest, and wildlife resources of the state; to serve the public and facilitate their participation in resource management activities; and to provide opportunity for all citizens to use, enjoy, and learn about fish, forest, and wildlife resources.*

# Conservation at a Glance

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- ▲ We Listen to Missourians
- ▲ What Missourians Say About Conservation
- ▲ The Economics of Conservation in Missouri
- ▲ Wildlife Recreation
- ▲ Hunting and Fishing
- ▲ Forestry and Wood Products





## We Listen to Missourians

The Missouri Department of Conservation believes that all Missouri citizens are important and we want to listen and act to earn their trust. Our job is to listen, understand, and personally deliver programs and services in a manner that benefits all Missourians and the fish, forest, and wildlife resources in Missouri.



To accomplish our mission we must listen to Missourians. We do this in a variety of ways.

- The Conservation Commission meets regularly and anyone may contact the Conservation Commission with comments or request to appear at a Commission meeting.
- The Director of the Conservation Department may be personally contacted at Department headquarters in Jefferson City, by telephone, or electronic mail.
- The Department Ombudsman works with citizens to resolve conflicts and answers a wide variety of questions by mail, telephone, and electronic mail.
- The Department conducts a wide variety of statistically accountable mail surveys, telephone surveys, and focus groups to determine the opinions and attitudes of Missourians about conservation and the Department of Conservation. The Department has conducted attitude, opinion, satisfaction, and participation surveys for over 30 years.
- The Department has eight regional service centers with staff available to assist Missourians with their conservation requests and needs.
- The Department's monthly magazine, free to Missourians who request it, includes a letter-to-the-editor section and an "Ask the Ombudsman" column.
- The Department maintains an extensive internet web page with conservation information, how to contact the Department, and an online comment form.
- The Department conducts frequent public forums to obtain interactive feedback from all Missourians at locations throughout the state.
- Department regulations are formed and discussed in a public setting that invites citizen participation.



## What Missourians Say About Conservation

The majority of Missourians feel the Department of Conservation is doing an excellent or good job of providing services to themselves (64%), their families (63%), the community (61%), and the state (67%). Most Missourians say they are either very familiar (21%) or somewhat familiar (65%) with the Missouri Department of Conservation.

Information from the Missouri Department of Conservation and the 2003 Conservation Opinion Survey, University of Missouri.



- Most Missourians report they are interested in Missouri's fish, forests, and wildlife (93%).
- Most Missourians (73%) agree that land should be acquired for fish, forest, and wildlife conservation.
- Most Missourians agree that "It is important for outdoor places to be protected even if you don't plan to visit the area" (91%).
- Most Missourians (79%) agree that the Department of Conservation should make an effort to restore animals that once lived or are currently very rare in the state.
- Most Missourians (82%) agree that the Department of Conservation should help private landowners who want to restore native communities of plants and animals.
- Over three-quarters agree that the Department "should assist communities that want to include trees and green spaces in housing, business, and shopping developments" (79%).
- Almost all Missourians (88%) approve of hunting for food.
- About one-half of Missourians (51%) approve of cutting down trees to make lumber, furniture, or other wood products.
- The majority of Missourians (55%) agree that trapping is OK as long as it is regulated.
- Missourians are outdoor-oriented, with households having one or more participants that enjoy watching television or outdoor programs (82%), read about nature and wildlife (76%), feed birds and wildlife at home (64%), garden (66%), use Conservation Areas (62%), fish (58%), go boating (40%), hunt (34%), target shoot (37%), or volunteer in environmental or conservation groups (15%).
- Time is mentioned as the biggest obstacle to the enjoyment of outdoor activities by Missourians.
- Missourians are a uniquely outdoor-oriented citizenry, with a majority preferring outdoor recreational activities (56%) over reading or watching TV (34%), or structured sports (9%).



## MISSOURI DEPARTMENT OF CONSERVATION



### The Economics of Conservation in Missouri

The amount of state sales tax revenue generated from fish, forest, and wildlife recreation spending is about the same amount of sales tax revenue received by the Department of Conservation from the one-eighth of one percent Conservation Sales Tax—

**Conservation pays its way in Missouri.**

Information from the Missouri Department of Conservation, the Missouri Forest Products Association, and the 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.

- In Missouri, the total economic impact of fish and wildlife recreation and the forest products industry is \$11.4 billion dollars annually.
- Since 1980, the Department has paid more than \$14 million dollars to Missouri counties in lieu of taxes. In fiscal year 2009, over \$1.47 million was paid to Missouri counties for forest cropland payments, levee and drainage district payments, in-lieu-of-property-tax payments, and county aid road trust payments.
- The forestry and wood products industry in Missouri is an over \$5.7 billion dollar activity and supports 31,700 jobs.
- Missourians and non-residents spend over \$3.3 billion dollars annually related to fish, forest, and wildlife recreation. These expenditures generate \$5.7 billion dollars annually of economic impacts in Missouri.
- The annual expenditures related to fish, forest, and wildlife recreation support 64,186 jobs in Missouri.
- Fish, forest, and wildlife recreation spending generates \$382 million dollars annually of state and local tax revenue.
- In Missouri, 2.9 million residents and nonresidents, aged 16 years and older, participated in fishing, hunting, or wildlife-associated recreation.
- Resident anglers spend 15.3 million days afield, resident hunters 9.2 million, and resident wildlife-watchers 13.4 million days in away-from-home activities, in Missouri. Nonresident anglers add 1.3 million days and nonresident hunters 544,000 days.
- Nonresident expenditures for fishing and hunting in Missouri are well over \$211 million each year. Each nonresident angler and hunter spends an average of \$617 dollars each year in Missouri.
- Deer hunters in Missouri, age 16 years and older, spend \$690 million each year.
- Deer hunting in Missouri generates \$1.1 billion dollars of business activity annually. This results in \$83 million in state and local tax revenue each year.
- Deer hunting expenditures annually support over 11,824 jobs in Missouri.



# MISSOURI

## *hunting and fishing*

Hunters	608,000
Anglers	1.1 million
Total Expenditures	\$2.4 billion
Total Jobs Supported	45,939
Earnings from Expenditures	\$1.2 billion
State and Local Tax Revenue	\$269 million
Total Business-Generated Revenue	\$4.2 billion



## STATE TAX REVENUE INFORMATION

Hunters and anglers in Missouri generate \$269 million annually in state and local taxes.

## JOBS

Hunters and anglers support 45,939 jobs each year.

## TAKE A CLOSER LOOK

- More Missourians hunt or fish than the number who attend St. Louis Rams or Kansas City Chiefs games.
- One of every four Missouri residents hunts or fishes.
- Annual spending by hunters and anglers is more than the cash receipts for cattle production in Missouri.
- The amount of sales tax revenue generated by fish, forest, and wildlife recreation is about the same amount of sales tax received by the Department of Conservation from the one-eighth cent sales tax—in other words, conservation pays its way in Missouri.

## CONSERVATION PAYS ITS WAY IN MISSOURI



Information from the Missouri Department of Conservation and the U.S. Fish and Wildlife Service 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.

# MISSOURI

*wildlife recreation*

Wildlife-Watchers	2.2 million
Total Expenditures	\$869 million
Total Jobs Supported	18,247
Earnings from Expenditures	\$493 million
State and Local Tax Revenue	\$113 million
Total Business-Generated Revenue	\$1.5 billion



## STATE TAX REVENUE INFORMATION

Wildlife-watchers in Missouri generate \$113 million annually in state and local taxes.

## JOBS

Wildlife-watching activities in Missouri support 18,247 jobs each year.

## TAKE A CLOSER LOOK

- In Missouri, adults involved in wildlife watching would fill Arrowhead Stadium in Kansas City more than 28 times.
- Missourians are outdoor-oriented—each year they spend 13.4 million days in wildlife watching activities away from their home. Two million enjoy observing, feeding, and photographing wildlife near their homes.
- The amount of sales tax revenue generated by fish, forest, and wildlife recreation is about the same amount of sales tax received by the Department of Conservation from the one-eighth cent sales tax—in other words, conservation pays its way in Missouri.



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Information from the Missouri Department of Conservation and the U.S. Fish and Wildlife Service 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.



# MISSOURI

## forestry and wood products

Total Forested Acres	14 million
Privately Owned Acres	85 percent
Publicly Owned Acres	15 percent
Wood-Using Industry Dollars	\$5.7 billion
Total Jobs Supported	31,700
Wood-Using Industry Labor Income	\$1.2 billion



### STATE TAX REVENUE INFORMATION

Forestry and the wood-using industries in Missouri generate \$57 million each year in state sales tax.

### JOBS

Wood industry firms and activities in Missouri support more than 31,700 jobs each year.

### TAKE A CLOSER LOOK

- Each year about 6 million tree seedlings are planted.
- More than 1 million acres of forests have been added to Missouri's landscape in the last 30 years.
- Forests in Missouri are increasing faster than they are being harvested.
- Most of the forests in Missouri are privately owned.
- Forests are important to Missourians who enjoy outdoor recreation such as camping, sightseeing, watching birds, canoeing, photographing nature, hunting or fishing. Many Department of Conservation areas have campsites or are open for primitive camping.
- Forests in Missouri are essential for healthy streams, clean water, wildlife habitat and environmental stability.



### CONSERVATION PAYS ITS WAY IN MISSOURI



Information from the Missouri Department of Conservation and the Missouri Forest Products Association.

# Our Pledge to Serve Missourians

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**T**he Missouri Department of Conservation's mission, vision and goals communicate our never-ending pledge to serve Missourians and to meet the requirements of the Missouri Constitution (Article IV, Section 40(a) through 46).

## Our Mission

To protect and manage the fish, forest and wildlife resources of the state; to serve the public and facilitate their participation in resource management activities; and to provide opportunity for all citizens to use, enjoy and learn about fish, forest and wildlife resources.

## Our Vision

- ▲ To have healthy, sustainable plant and animal communities throughout the state of Missouri for future generations to use and enjoy, and to have fish, forest and wildlife resources in appreciably better condition tomorrow than they are today.
- ▲ To have all Missourians understand the relationship and value of plant and animal communities to our social and economic well-being.
- ▲ To have citizens and government agencies work together to protect, sustain, enhance, restore or create sustainable plant and animal communities of local, state and national significance.

## Our Goals

The Conservation Department's strategic plan, *The Next Generation of Conservation*, leads staff and resources into the future with nine goals. Like the strategic plans that preceded it, *The Next Generation* outlines how the Conservation Department will fulfill its constitutional mandate to serve Missourians by protecting the state's fish, forest and wildlife resources.

The strategic plan gives our generation of conservationists a path to success. Through partnerships, sound scientific data, respect for public opinion and a dedication to public service, we can fulfill our obligation to protect and manage our natural resources for the benefit of future generations.

### The Next Generation Goals

- ▲ Conserving Plants, Animals and Their Habitats
- ▲ Protecting Clean and Healthy Waters
- ▲ Promoting Healthy Trees and Forests

- ▲ Preserving Missouri's Outdoor Recreation Heritage
- ▲ Teaching Missourians About Fish, Forest and Wildlife Resources
- ▲ Supporting Conservation in Our Communities
- ▲ Helping Private Landowners Advance Conservation
- ▲ Serving Nature and You on Conservation Areas
- ▲ Accounting for Department Operations

## What We Believe

- ▲ Excellent public service is what we will provide. We are committed to providing excellent public service in a manner that benefits the fish, forests, wildlife and people of Missouri. We will be courteous, responsive and flexible in all of our actions. We will set the example we want others to follow as we responsibly manage the fish, forests, wildlife, lands and habitats under our stewardship.
- ▲ All citizens are important; we value their trust and their point of view. All Missouri citizens deserve respect. Our job is to listen, understand and personally deliver programs and services that will benefit each Missourian.
- ▲ Missourians are our partners to achieve conservation success. We will work together with Missourians, communities and organizations in our conservation efforts and we will encourage everyone to be active conservationists.
- ▲ Employees are the Department's most important resource. All employees deserve a safe, high quality work environment that promotes opportunities for professional and personal growth, teamwork and individual respect. We will empower employees to make timely and innovative decisions. We will encourage diversity and be open to new ideas. We will create an enjoyable workplace because we have a passion to help others and we believe in our conservation mission.
- ▲ Fairness, objectivity, sound science, integrity and accountability will guide our actions. Our decisions and behavior will be based on fairness, objectivity and the best scientific information. We will act with the highest degree of integrity and ethical consideration, expecting the best of ourselves and one another. We will be accountable to the citizens of Missouri to do what we say.

# Bringing the Goals to Life

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## Conserving Plants, Animals and Their Habitats

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### Resource law enforcement

MDC enforces laws in the *Wildlife Code*, as well as other state laws for the safe public use of MDC-owned lands. Conservation agents contacted 200,999 hunters and anglers in FY10 to ensure compliance and provide regulation information. During these contacts, agents noted 27,691 resource violations, issued 3,678 written warnings and made 8,048 arrests. This resulted in a 93.5 percent conviction rate.

### Roadside management

MDC teamed with Missouri Department of Transportation (MoDOT) south of St. Louis to control invasive species such as spotted knapweed, teasel, sericea lespedeza and weeping lovegrass. As a result, more than 1,500 acres of highway rights of way along 90 miles of I-44, U.S. 67, and state highway 32 in St. Francois and Ste. Genevieve counties have been treated. MDC has provided training to MoDOT on invasive plant identification, coordinated herbicide treatments and has treated infestations on the right of way and on adjoining private land partners. Highway rights of way serve as effective conduits for exotic species due to continuous disturbance and the “free ride” that vehicles often provide. Invasions often start on rights of way and move into the surrounding landscapes. Partnerships like this one will help reduce the threat to nearby natural communities and check the growth of infestations of new invasive species.

MDC, along with MoDOT, the Missouri Highway Patrol and Ameri-Corps, performed a prescribed burn on the Highway 54 median south of Mexico, Mo. With more than 4 miles of median amounting to about 55 acres, there were challenges to getting this completed in a quick but safe manner. MoDOT provided signs and closed the passing lanes in each direction for safety purposes. Missouri Highway Patrol provided additional traffic control. Having Ameri-Corps workers available allowed for two crews to simultaneously ignite multiple median sections. The burn was com-

pleted without any problems. MoDOT personnel are looking to use this practice as a management tool for other native grass plantings and this was a great chance for them to see “hands on” how this can be completed in a safe manner allowing MoDOT personnel to take the lead on any future burns.

### Lake sturgeon stocking

MDC tagged and stocked 2,771 lake sturgeon into the Missouri River near the mouth of the Osage River. An additional 11,000 lake sturgeon, raised at the USFWS's Genoa Fish Hatchery, were stocked into the Missouri and Mississippi rivers to help restore populations. Some of the lake sturgeon were divided into groups and stocked into different habitat types to determine if stocking in any one of those habitats could increase survival. Some were also tagged with different tags to check on tag retention and to differentiate between stocking locations. Blind Pony Hatchery has been raising and stocking endangered lake sturgeon since 1984 as part of MDC's lake sturgeon restoration program. Since then, Blind Pony staff have raised and stocked 283,442 lake sturgeon into the Missouri and Mississippi rivers. Lake sturgeon propagation is playing a significant role in the recovery of the population in Missouri.

### Greater prairie-chicken recovery

MDC and its Missouri Grasslands Coalition partners continued to implement the prairie-chicken recovery plan. This year 100 prairie-chickens were moved from Kansas to Wah'Kon-Tah (WKT) Prairie in western Missouri. The booming ground established during 2009 was used again in 2010 with the addition of a second, smaller booming ground also on WKT Prairie. MDC and University of Missouri graduate students documented reproductive success this spring. Additional work on private lands totaled more than 6,600 acres of habitat restoration/enhancement in this grassland landscape for the benefit of prairie-chickens and other grassland birds.

### Feral hog control

In Missouri, feral hogs are known to occur in 40 counties, with established populations in 19 counties. Feral hogs directly and indirectly damage



natural communities, destroy agricultural crops, compete with native wildlife and serve as reservoirs of disease. The goal of this project is to learn how to more efficiently control feral hogs and to provide a scientific basis for future management.

Since 2009, MDC has captured 249 and euthanized 248 hogs as part of the hog eradication effort.

In another effort between the US Department of Agriculture and private landowners 474 hogs were removed in 2009. Data collected from these hogs will be used in a population model to predict feral hog reproductive rates and population size.

We have also captured and released six hogs with tracking collars. The tracking collars provide information about feral hog movement that also aids in developing effective eradication plans.

**Governor's Feral Hog Task Force**—In the fall of 2007, Gov. Blunt created a special task force to address the concerns associated with feral hogs. The task force, co-chaired by MDC and the Missouri Department of Agriculture, was composed of eight additional members, including other state, federal and private organizations. The task force completed a report in 2008 which outlined a response to the feral hog population in Missouri.

New legislation proposed by the Governor's Task Force was passed this year, adding the possibility of a felony for the illegal release of hogs. This legislation also allows conservation agents to enforce the provisions of the feral hog statutes and prohibits the live capture and possession of live feral hogs on all public lands. In addition to criminal penalties and fines, violators may also face administrative fees of up to \$1,000 for each offense through the Department of Agriculture. According to the statute, each hog released constitutes a separate violation. Other components of the new legislation include fencing and health standards for those individuals possessing feral hogs on private land.

This new legislation is a significant advancement in the war on feral hogs and is much stronger language than the previous feral hog law. The importance of such legislation is exemplified by the discovery of two cases of brucellosis and one case of pseudorabies in feral hogs in Missouri through standard blood testing procedures.

## Natural communities

At the end of FY10 there were 180 Missouri Natural Areas totaling 70,759 acres. These areas represent the best examples of healthy natural communities within the state.

During the last fiscal year the Twenty-Five Mile Prairie Natural Area (120 acres) in Polk County, within the Twenty-Five Mile Prairie Conservation Area, was added to the Natural Area System. This area features 108 acres of rare dry-mesic limestone prairie and 12 acres of rare dry limestone prairie. The prairie is botanically rich with 178 native plant species documented to date. Less than one-tenth of 1 percent of high-quality unplowed prairies remain in Missouri and remnant prairies occurring on limestone soils are uncommon. Only one other prairie in the Missouri Natural Areas System conserves limestone prairie. In addition to being botanically diverse, the prairie supports a population of the regal fritillary, a species of conservation concern. The prairie also supports a complement of typical prairie bird species including Henslow's sparrow, dickcissel, grasshopper sparrow, field sparrow, Bell's vireo and northern bobwhite quail.

## Conservation partnerships aid birds

In 2010, the 55 Missouri Bird Conservation Initiative (MoBCI) partner organizations were involved in nine projects across Missouri. MDC grant funds (\$100,500) were leveraged to produce a total contribution of \$345,150 dollars in cash and match for project work. Each of the nine projects involved two to seven partners who represent a broad range of interests but have a common goal to provide habitats suitable for a wide range of bird species. Each year MoBCI plays a substantially bigger role in linking Missourians with national and international bird-related initiatives.

The Avian Conservation Alliance (ACA), the Missouri Conservation Heritage Foundation (MCHF), and MDC have advanced bird conservation in Mexico and Central America. A total of \$60,000 has been delivered through the American Bird Conservancy to partners in the Yucatan Peninsula, Mexico, to purchase 247 acres of dry woodland and coastal wetland forests for Missouri's migrant birds. This is part of a long-term effort to protect and manage land in this region as critical habitat for birds that spend eight months of the non-breeding season south of the USA/Mexico border.

MDC and its ACA partners are developing additional projects in Honduras and Mexico to help fund education center programs, park guards' activities, forest management, multi-taxon bird monitoring strategies and programs. Plans were well underway to establish the Honduran Ornithological Society and to host an Important Bird Area (IBA) workshop to establish where the IBAs need to be located and species in need of conservation action.

## Endangered species

Although no species were added to or removed from the state endangered species list, MDC conducted inventories and monitoring of some of our state endangered species as well as species of conservation concern to determine their current status. These field studies may lead to adjustments to our state endangered list in the future. The USFWS recently designated critical habitat for two species found in Missouri (Tumbling Creek cavesnail and Hine's emerald dragonfly).

Through the USFWS Endangered Species Funds, one research project was completed (Recharge Delineation of Kinney Cave and Poor's Well: Two new Ozark cavefish locations in Newton County), and one new project was approved and initiated (Investigation and detection of infertility factors in populations of Mead's milkweed). Two research projects are ongoing (Relationship between forest management and summering Indiana bats, and Spatial and temporal dynamics of habitat use and seasonal movements by Niangua darters).

Also through the USFWS funds, Missouri participated in the approved Midwest HCP Proposal (Development of a multi-species habitat conservation plan for wind energy development in USFWS Region 3). In addition, two Recovery Land Acquisition projects are ongoing (Burnt Mill Cave Conservation Area for the protection of Niangua darters and Indiana and gray bats; and Marquette Island Conservation Area for the protection of pallid sturgeon, interior least terns and Indiana bats).

Through the use of USFWS Landowner Incentive Program (LIP), one project was completed and three grants are ongoing. The completed project (Karst Conservation Assistance in Southwest Missouri) resulted in 18 private landowner projects to restore habitat for the Ozark cavefish. In addition, workshops to discuss the plight of the cavefish and best management practices to improve their habi-

tat were attended by more than 1,200 landowners. Four new locations of this endangered fish were discovered as a result of these workshops.

The ongoing LIP projects have resulted in 1) habitat restoration by 16 private landowners for the state endangered greater prairie-chicken and other declining prairie species; 2) the initiation of a new effort by MDC to use conservation easements as a tool for long-term land protection; the first easement to protect the Ozark cavefish is currently in final negotiations; 3) cooperative agreements with nine land conservation organizations to increase their capacity to conserve species of conservation concern; and 4) the coordination of the Missouri Land Trust Coalition.

The endangered species coordinator (ESC) also received non-USFWS funding to assist with the new initiative to develop stronger partnerships with Missouri land trusts to help them increase their capacity to permanently protect land for Missouri's species of conservation concern. These funds were used to host workshops in Missouri for local land trusts to assist with their implementation of the Land Trust Standards and Practices and to provide partial scholarships to land trust staff and board members to attend workshops that were hosted by the national Land Trust Alliance.

In addition to project coordination and grant administration, the ESC also assisted staff in issues associated with white nosed syndrome in bats, American burying beetle potential reintroduction, the finalization of the Missouri Topeka Shiner 10 Year Strategic Plan, and drafting of the Missouri Massasauga Rattlesnake Action Plan.

## Bagnell Dam barrier net

The Bagnell Dam barrier net is designed to prevent fish in Lake of the Ozarks from becoming either stuck on the trash racks or pumped through the turbines. Fish kills resulting from these two actions have been well documented at Bagnell Dam. Although paddlefish were the primary species of concern that prompted the development of the net, most other species exceeding 9 to 10 inches in length also receive protection. The fish barrier net was installed in 2008—the result of several years of consultation between MDC, the Missouri Department of Natural Resources, U.S. Fish and Wildlife Service and AmerenUE.

One of the largest of its kind in the United States, the net extends approximately 800 feet from the middle of the dam to the north shore of the lake. It also spans the entire water column,



from the surface to depths of 115 feet. The mesh openings are 2 x 2 inches. The net is held in place by an extensive array of buoys at the surface and massive concrete weights on the bottom. Evaluation of the efficiency of the net began in 2009 and will continue through October of 2010. Preliminary results of the net's performance have been encouraging. Unlike pre-net surveys, only limited numbers of small fish have been observed passing through the turbines.

The protection this net provides was made apparent in the fall of 2009. Heavy leaf litter had collected on the net. In an effort to remove some of the leaf load, three spill gates were opened for about three hours. During that short time, approximately 400 fish, including 100 paddlefish, were killed. Those fish had been near the dam, but were prevented from approaching the turbines due to the barrier net. Ameren was eventually able to pull the leaf load through the net by conducting a series of short term on-and-off generation cycles. Once the evaluation phase of net monitoring ends (October 2010), a permanent operational monitoring protocol will be initiated. This less-intensive monitoring will be designed to give us a "heads up" regarding any potential problems with net integrity.

## **Freshwater mussels**

A greater proportion of freshwater mussels are on the federal threatened and endangered species list than any other group of animals in North America. For the past 10 years, MDC has worked in partnership with Missouri State University in the production of freshwater mussels. MDC and Missouri State University have refined propagation techniques for black sandshell, Neosho mucket, pink mucket, fat mucket and snuffbox mussels. In 2009, 53,000 of these mussels were produced at Chesapeake Hatchery. Mussels produced in MDC facilities are used for stocking, research or culture (grow-out). Using techniques developed at Missouri State University to raise the juvenile mussels to a larger size, MDC has the capability of producing several mussel species for reintroduction purposes. With the completion of a mussel management plan, and future population assessment efforts, the stage is set for reestablishing some of Missouri's declining freshwater mussel populations.

## **Shovelnose sturgeon**

MDC is implementing a new study designed to better manage shovelnose sturgeon. Sturgeon species in the Mississippi River basin have been declining since the early 1900s. Two of the three species that occur in Missouri, the lake and pallid sturgeon, are already classified as endangered, and now the shovelnose sturgeon has become a species of concern. Over the past decade, worldwide demand for caviar has skyrocketed along with the harvest of roe fish, like the shovelnose sturgeon. This is because the caviar industry continues to place a high demand on wild roe. The only commercially harvested sturgeon in Missouri is the shovelnose, and the huge increase in harvest of this species has significantly affected the population. Recent studies have shown that the shovelnose sturgeon population is experiencing record harvest levels, declining catch rates and increasing mortality rates. These same studies also indicate that the Mississippi River shovelnose population is not sustainable under current regulations. Because of MDC's concern over the shovelnose sturgeon population, we implemented a Shovelnose Sturgeon Mortality Study. MDC will use the information from this study to address the decline in the shovelnose sturgeon population and better regulate the commercial shovelnose sturgeon fishery.

## **2010 National Fish Habitat Award**

The Lower Bourbeuse Landowner Committee and MDC won the 2010 National Fish Habitat Award—Extraordinary Action in support of Fish Habitat Conservation for their efforts to improve aquatic habitat in the Meramec—Lower Bourbeuse watershed. A landowner committee governs and guides restoration efforts in the Lower Bourbeuse Conservation Opportunity Area. The committee contributed their time and expertise and chose funding sources for proposal competitions. Farm tours were used to encourage neighbor participation. There has been continuous demand for best management practices for agriculture, fisheries, forestry and wildlife to protect, enhance and restore natural resources. Efforts include: fencing, alternative water systems and secured cattle crossings keep cattle out of streams; all help addresses the root causes of habitat deterioration.

## Conservation genetics

The Statewide Conservation Genetics Program uses the principle that there is genetic diversity throughout Missouri's animal and plant species that determines their productivity and survival. By identifying this diversity, often through analysis of DNA, rare animal and plant species can be protected, sport fishing can be improved, hatchery strains can be selected and species can be restored. DNA "typing" often can be used to identify species, sources and sometimes "parents" of animals and plants in the wild. Species studies involve walleye, several darters and crayfish, black bass, shortleaf pine and hellbenders.

## Largemouth bass in Bull Shoals Lake

By sinking brush in shallow coves of Bull Shoals Lake, MDC has been attempting to mimic the beneficial environment created for small largemouth bass during times when rising lake levels flood plants, shrubs and trees on the lake shore. We monitored the amount of largemouth bass nesting and the number of juvenile largemouth bass in areas after brush was sunk in the coves. The number of large predatory fish within these coves was also monitored to determine their effect on recruitment of young largemouth bass. We learned that about twice as many adult largemouth bass nested in sites with brush, yet this did not result in an increased number of juvenile largemouth bass during the summer and fall. It appeared potential predators of juvenile largemouth bass were also attracted to the brush sites. We learned that adding brush is an effective way to increase the number of largemouth bass nests within a cove but does not appear to increase the number of largemouth bass young in the lake.

## Crayfish bait industry

The introduction and invasion of non-native crayfish into lakes and streams is a serious problem. The presence of non-native crayfish has resulted in the loss of native crayfish, reduced amphibian and reptile numbers, changes in aquatic habitats and collapses of prized fisheries. The live-bait trade has been a primary source for the introduction of invasive non-native crayfishes. In response to this problem, some states have banned the use of live crayfish as bait. In Missouri we allow the sale of four native crayfish species as bait and prohibit the sale of our wild crayfish as bait.

MDC worked with bait shop owners and inspected crayfish sales records. This effort revealed that crayfish were supplied by commercial sources in Missouri and six other states, and that they also were obtained illegally from the wild. In a follow-up telephone survey of Missouri bait shops that sell crayfish, 98 percent of shop owners admitted that they did not know what species they were selling. Subsequent MDC efforts have focused on removing illegal species from bait shops, and educating bait vendors on bait regulations and invasive species. Additional changes to policies or regulations regarding sales of live crayfish and invasive species may be necessary.

At the request of bait shop owners, we recently published and distributed a crayfish identification guide. We value our working relationship with bait shop owners because they play an important role in Missouri's fishing industry.

## Worked with industry, state and federal regulators to protect state's resources

Responded to requests for information regarding Missouri's Species and Communities of Conservation Concern—helping more than 1,000 projects needing federal permits or using federal funds to comply with provisions of the Endangered Species Act. Also, MDC participated in and responded to federal and state environmental review processes from those seeking to comply with the National Environmental Policy Act, Clean Water Act and other federal and state laws, rules and regulations. In order to comply with state and federal environmental laws and the National Historic Preservation Act, MDC reviewed and adopted plans for all of our construction and resource-restoration activities. These actions ensured that requirements were met for compliance, and necessary permits and clearances obtained. Additionally, reviews provided helpful information to manage for Species of Concern. Most input was provided in planning phases, thereby reducing surprises and project delays once construction began.

MDC continues to participate in the environmental review and coordination of several licensing proposals to develop hydropower within the Mississippi River. Applicants submitted to the Federal Energy Regulatory Commission proposals to develop traditional hydropower at Locks and Dams 20, 21, 22, 24, 25 and 26, and to develop hydrokinetic projects at 11 locations in the portion of the river below Cairo, Ill. MDC worked with the Missouri Department of Natural Resources, state

agencies from Illinois, Tennessee and Kentucky, and several federal agencies to consider impacts to fish, forest and wildlife resources, including public lands. Coordination with the multiple agencies and applicants to ensure adverse natural resource impacts are avoided, minimized and mitigated, as appropriate, will require multiple years, depending on the complexity of the proposed project.

## Conserving all wildlife

The Comprehensive Wildlife Strategy (CWS) is guiding conservation action for all wildlife, with emphasis on proactive conservation that will prevent the need for additional listing of declining species of fish, wildlife and plants. The Missouri strategy is a tool for conservation planning and implementation, integrating priority projects and initiatives with partners and other agencies. Over the past year there have been more than 20 COA hosted planning/implementation meetings. Recent meetings include the Current River, Hi Lonesome/Green Ridge, Middle Meramec, Nian-gua River, Grand River Grasslands, Missouri River Hills, LaBarque Creek Watershed, Iatan/Weston Missouri River Corridor, Bryant Creek and North Fork River. Special events related to various COAs included River Camp, a public awareness event hosted by River Relief in the Moniteau Bluffs COA, a watershed plan signing ceremony at LaBarque Creek COA, and series of market planning meetings for the Middle Meramec COA. Significant land protection (fee title acquisition or conservation easement) has occurred in LaBarque Creek COA, Lower Grand River COA, Missouri River Hills COA, Hi Lonesome COA, and Confluence COA.

MDC works closely with Conservation Federation of Missouri to integrate conservation actions in the priority geographies across the state. Some of these activities were supported by the Teaming With Wildlife Mini Grants program (\$25,000 available for grants, maximum \$2,500) to TWW Coalition members. Citizen participation was supported by a COA Team Training Workshop held in Association with the Missouri Natural Resources Conference. This was the first in-person opportunity for partners to share successes and learn what is working for other teams around the state. Master Naturalist Chapters are increasingly active in Conservation Opportunity Areas, working closely with stakeholder teams to participate in management or collect data on the benefits to wildlife. The framework of priority geographies from the Missouri CWS was included in the revision of the

*Terrestrial Natural Communities of Missouri* by Paul Nelson. CWS progress in the priority geographies appears often in the *Missouri Conservationist* and is posted regularly at the Missouri Teaming With Wildlife website.

## Invasive species

The third season of Emerald Ash Borer (EAB) trapping was completed with no new signs of EAB outside the initial discovery in Wayne County. In FY10 the USDA Forest Service's State and Private Forestry program awarded a \$52,000 grant to MDC to implement focused outreach associated with Emerald Ash Borer (EAB). These funds were used to secure air time to share information about the dangers associated with moving firewood and to conduct outreach to key groups such as the Missouri RV and Campground Association, the Missouri Municipal League, Missouri Community Betterment, and others. In addition, MDC provided \$52,000 in match through the Tree Resource Improvement and Maintenance (TRIM) cost-share program. Five EAB focused projects were funded through TRIM. The five completed activities were public tree inventory, ash tree removal and replanting, and educational programs for the public. The goal of the program is to help communities better manage their tree resource.

With an approved Aquatic Nuisance Species (ANS) plan, Missouri received its first ANS grant. The grant was used to buy equipment and supplies to implement MDC's fish hatchery biosecurity plans, air the "Help Stop Aquatic Hitchhikers" message, and survey 10,000 registered Missouri boat owners. Survey results were used to determine what boat owners know about ANS and how best to reach them with future information.

MDC worked hard to elevate the awareness of invasive species in Missouri through official listings and outreach. Examples include: addition of the invasive marbled crayfish, *Procambarus marmoratus*, to MDC's prohibited species list, development of a general "don't dump" sign for MDC-managed lakes and designing and printing of ten two-sided, full-color fact sheets.

A project beginning in June 2010 with a new partner, Truman State University, is focused on inventory and eradication of spotted knapweed. Results will include maps and GPS locations of spotted knapweed in six north-central Missouri counties. The maps will enable Missouri Depart-



ment of Transportation, MDC and private landowners to find and treat spotted knapweed with herbicide during a critical time of year.

## **State Wildlife Grants**

This year marks the 10th anniversary of State Wildlife Grants (SWG). Since its inception, SWG has enabled our conservation community to make significant contributions to the restoration and management of habitats in Missouri and their associated fish, forest and wildlife resources.

SWG is one of several sources of federal assistance used by MDC to ensure that Missouri has healthy, sustainable plant and animal communities for future generations to use and enjoy. Missouri has also received substantial funding through Competitive State Wildlife Grants (SWG-C), a sister program. Grant funds were also made available through the Wildlife Diversity Fund, an internal grant, and through the Missouri Bird Conservation Initiative grants. Missouri has accomplished more than \$45.8 million in conservation actions since 2002 through SWG and its associated grants.

Public and private landowners and resource managers in every region of Missouri benefit from conservation actions made possible through the State Wildlife Grants Program. Thousands of acres annually are positively affected by conservation practices such as clearing unwanted trees and brush, replanting native species and applying prescribed fire or any number of other management techniques to simulate natural community processes. Practically every habitat has been improved by projects made possible by State Wildlife Grants, including grassland/prairie, glade, savanna/woodland, forest, wetlands, rivers, streams, lakes and karst. Funding has also supported research, surveys, monitoring, technical assistance to private landowners and strategic conservation planning efforts and developments.

## **Fungus infection in hellbenders**

The chytrid fungus can cause death in some amphibians and has resulted in die-offs in populations of some amphibian species. While chytrid fungus has been detected in several populations that have declined, it is often unclear whether the fungus is a benign co-occurrence or the driver of declines.

We set out to investigate whether chytrid fungus has been historically present in one of Missouri's declining amphibian species, the hellbender, or if the fungus has just recently appeared in hellbenders as their populations have declined.

To determine if chytrid fungus was in historical hellbender populations, which are now in decline, we collected skin tissue from Missouri Eastern hellbenders, Ozark hellbenders and 13 unknown subspecies collected and archived in museums between 1896 and 1994. We confirmed the presence of chytrid fungus in these archived hellbenders from the North Fork of the White, Big Piney, Meramec and Current rivers. We did not detect the fungus in archived hellbenders from the Niangua, Gasconade or Eleven Point rivers, though few samples were available from these rivers after population declines were first noticed.

Our findings suggest that chytrid fungus is a recent pathogen in North America and did not occur prior to the 1960s, although our detection of the fungus in 1969 is the earliest reported for any subspecies of hellbender and for any amphibian in Missouri. Because chytrid fungus was present prior to or during the period when hellbender populations began to decline in the Big Piney, Meramec, Current and North Fork of the White rivers, it is possible that the fungus contributed to hellbender declines in these rivers. In contrast, chytrid fungus was detected in hellbenders from the North Fork of the White River at least a decade before declines were obvious. This suggests declines were not the result of mass mortality of adult hellbenders caused by the fungus. We need to conduct further research on how the subspecies or life stage of hellbenders might affect the lethality of the fungus.

## **Topeka shiner monitoring**

Since 2000, we have monitored the federally endangered topeka shiners at 12 sites in the upper Moniteau Creek watershed. We have learned this fish species is most abundant in upstream sites on the Moniteau Creek and in a headwater stream that flows into Moniteau Creek. Overall we concluded that the Moniteau Creek population of topeka shiners is stable or increasing since we started our monitoring efforts.



## Protecting Clean and Healthy Waters

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### Stream Stewardship Trust Fund

The Stream Stewardship Trust Fund is an in-lieu fee program created in 1999 to restore, enhance and/or protect stream systems and associated riparian habitats. From its inception in 1999 until the end of FY10, more than \$4.9 million had been collected through the program. The program and funds are administered by the Missouri Conservation Heritage Foundation, and MDC applies for grants to use toward protecting stream resources. In FY10, five projects costing \$707,000 were approved to protect Missouri's stream and riparian corridor.

### Stream Teams

Missouri Stream Team grew to 4,115 teams throughout the state. A total of 132,283 volunteer hours were committed to enhance and restore Missouri Streams. Time was spent fostering watershed groups called Stream Team Associations and an executive director was hired for the Missouri Stream Team Watershed Coalition. The Coalition is made up of representatives from associations throughout the state with the mission to serve as a resource for information, education, stewardship and advocacy; it is an opportunity to unite the voices of thousands of Stream Team volunteers as one.

### Stream Crossing Workshops

Ozark and Southeast region county government employees attended two Stream Crossing Workshops. Seventy people from eight counties attended workshops in Ellington (Reynolds County) and Cabool (Texas County). The workshop focused on educating participants on maintaining their stream crossings in an efficient and aquatic-friendly way. Follow-up evaluations were overwhelmingly positive.

### Streambank stabilization

Since 2004, MDC has been evaluating the effectiveness of several techniques for stabilizing the banks of streams and rivers to reduce soil erosion and bank caving. We have learned that the most promising bank stabilization techniques used

either log weirs (a series of large logs anchored into a streambank to divert water from the bank), large rocks at the base or bottom of the streambanks, or mechanical sloping of the streambank along with planting trees, shrubs and grasses. Any one technique might not be the best for all streambank erosion problems, but we learned that these three techniques worked best for most of the streambank caving and erosion situations studied.

### Focusing on priority watersheds

Introduced *Strategies for Watershed Management*. It is meant to focus efforts on priority watersheds where there is a high likelihood for success, including stakeholder involvement. This plan allows regions the flexibility to decide their top priorities and how and where to focus their resources. By taking a priority watershed approach and by collaborating with watershed stakeholders, Best Management Practices developed are more likely to be used, which means the receiving streams are more likely to benefit.

### LaBarque Creek Watershed Conservation

Signing of the LaBarque Creek Watershed Conservation plan culminates five-plus years of MDC efforts to assemble a partnership, document the watershed's biodiversity and agree on a plan to conserve the watershed and its natural resources. Signing partners include: Friends of LaBarque Creek Watershed, Stream Team #2991, Jefferson County Government, MDC, DNR, East-West Gateway Council of Governments, Missouri Native Plant Society, Ozark Regional Land Trust, The Nature Conservancy, The Open Space Council and Webster Groves Nature Study Society. These partners contributed to the creation of the plan and pledged their support for its contents and implementation. The East-West Gateway Council of Governments (EWG) nominated the Friends of LaBarque Creek Watershed, Jefferson County Government and MDC for a partnership award relating to the completion of the watershed plan. The award was presented during EWG's annual awards meeting in November.

### Mississippi River monitoring

A cooperative effort among the U.S. Army Corps of Engineers, U.S. Geological Survey and states in the upper Mississippi River basin. Long-term trends in fisheries, water quality, invertebrates,



forest resources, land use and land cover for the entire upper river system are monitored through a network of state-operated field stations.

Missouri's contribution is the Big Rivers and Wetlands Systems Field Station, which began operation in 1991 and monitors conditions in the 25 river miles both north and south of Cape Girardeau. Water-quality data are collected year-round and fisheries data are collected from June through October each year. This information is used by several agencies in and outside Missouri. The program also is involved in answering specific research or management questions that come to light from analysis of the monitoring data, and these questions involve issues ranging from small invertebrates to birds.

### **Reservoir habitat improvements**

Working with a variety of partners, MDC continued to enhance reservoir fish habitat at several locations during FY10. Working with Bass Pro Shops, the Arkansas Game and Fish Commission and the National Fish and Wildlife Foundation, MDC is continuing projects in Table Rock Lake, Lake Taneycomo and their watersheds. As a part of these efforts, 583 new brush structures were placed and 800 tons of rock were used to construct 76 structures in the form of rock piles and reefs at Table Rock Lake. Planning is underway for additional structures at Table Rock Lake and for habitat enhancement in the upper reaches of Lake Taneycomo.

Two rock reefs were installed within Ha Ha Tonka State Park on Lake of the Ozarks. Missouri State Parks, MoDOT and RockWorks assisted MDC with construction. Funding for this project originated from MoDOT (mitigation for the Highway 5 and 54 projects), and was coordinated with other bank stabilization work being done in the park. These reefs will provide more habitat diversity.

Fish attractors were also added to Stockton Lake with the aid of U.S. Army Corps of Engineers. Forty-one of 55 signed attractor locations were replenished with new brush. An additional 22 brush piles were constructed and recorded with GPS waypoints in unsigned locations. All of the GPS coordinates with map locations were added to the MDC website fish attractor maps for angler use. MDC's website has more information concerning the location of brush piles and other habitat structures in Missouri reservoirs.

### **River basin management**

Participated in various interstate working groups to implement ecosystem-based management necessary for the conservation and enhancement of natural and recreational resources of the Missouri, Mississippi and White rivers and their floodplains. MDC helped direct the implementation of \$24.6 million available through the Mississippi River Environmental Management Program (EMP) for biological monitoring and habitat restoration, and \$6.3 million available for planning efforts within the proposed Mississippi River Navigation and Ecosystem Restoration Program. Both programs are funded by the U.S. Army Corps of Engineers.

Three EMP projects on MDC-managed lands include continued design of the Ted Shanks Conservation Area wetland-enhancement project, and forest and over-wintering fish habitat enhancements on the Upper Mississippi Conservation Area.

White River basin coordination focused on the completion of two studies. These studies are under the umbrella of the White River Comprehensive Study. An umbrella under which projects can be conducted and funded to the benefit of basin stakeholders. Results of the studies will guide implementation of measures to improve dissolved oxygen levels in the tailrace at the upper end of Lake Taneycomo.

### **Fish contaminant monitoring**

MDC annually solicits input from the Department of Health and Senior Services and other organizations to determine where we need to evaluate contaminants in fish. We then coordinate with the Missouri Department of Natural Resources (MDNR) to collect samples, evaluate contaminants in fish and compile the results in the form of public fish consumption advisories.

Recently, MDC has worked closely with the MDNR and U.S. Fish and Wildlife Service to define contaminant levels associated with biological impacts to aquatic organisms from Big River in the Southeast Missouri Mining District and the Spring River basin in the Tri-States Mining District. These definitions will be used to estimate impacts to natural resources and develop damage claims as part of the Superfund process.

MDC continues to implement a long-term monitoring program for mercury in fish that uses small bits of muscle tissue from live fish. Research indi-

cates that this small bit of muscle tissue is representative of the entire fillet and the removal of the tissue has no negative impact on fish survival.

### **Fish kill notification and response**

Because of a new agreement between MDC and the Missouri Department of Natural Resources (DNR), we have streamlined the process of responding to reports of fish kills in Missouri's lakes and streams. As part of the new agreement, MDC supplies DNR with contact lists for MDC Fisheries and Protection Division regional staff. All MDC staff learning or discovering a fish kill are to notify DNR as soon as possible. These changes in procedure have aided in reducing response time for pollution and fish-kill incidents.

We plan to streamline the process even further by updating our historic fish-kill database. The updated program is expected to allow direct uploading of data from on-scene reports as well as provide fish value estimates into an integrated report provided to DNR's enforcement branch. An additional planned database will map the fish-kill records in the historic database.



## **Promoting Healthy Trees and Forests**

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### **Forest Resource Assessment and Strategy**

Missouri's Forest Resource Assessment and Strategy (FRAS), was officially adopted in June 2010. FRAS is an evaluation of conditions, trends, threats and opportunities facing our forests. Through the development of a forest opportunity model we were able to evaluate forest opportunity areas that meet the following two conditions: 1) areas that offer the greatest existing and potential forest benefits and services, such as biodiversity and soil and water conservation; and 2) areas where intervention would make the forest less vulnerable to poor harvesting practices, urban development pressure, invasive insects and diseases. Based on criteria identified by stakeholder and agency natural resource professionals, the model allowed for the identification of Forest Opportunity Areas and Priority Forest Landscapes. Forest Opportunity Areas are areas which offer Missouri's best geographic opportunities for sustaining forest resources and

the benefits and services derived from them.

Priority Forest Landscapes are large landscapes of concentrated Forest Opportunity Areas.

In addition, 10 Urban Forest Opportunity Areas were identified. These include the 10 largest metropolitan areas, based on population, and represent areas that stand to gain the most from urban forestry strategies

FRAS is also a comprehensive strategy for sustain these forest resources and the benefits and services we expect from them. FRAS is guided by three important priorities: 1) conserving working forest landscapes, 2) protecting forests from harm and 3) enhancing public benefits from trees and forests. This assessment will be an effective tool for conservation planning and implementation, integrating priority projects and initiatives with partners and other agencies.

### **Conservation easement grant**

The USDA Forest Service's State and Private Forestry program awarded a \$190,000 grant to MDC to facilitate the protection of high-priority privately owned forest land by providing funding to land trusts to secure conservation easements. Through this grant, stewardship fees and closing costs on three tracts competitively approved by MDC were paid, allowing for the protection of 1,443 acres. The three tracts are located in Stone, Montgomery and Warren counties. Keeping these tracts intact will help to ensure that they can remain working forests into the future, provide wildlife habitat to species requiring large blocks of contiguous forest and minimize negative effects of fragmentation (exotic plants, wildfire, insects and diseases, etc.). The easements included requirements for sustainable forestry practices.

### **State Forest Nursery**

The state forest nursery annually grows and distributes about 3.8 million seedlings of more than 60 species generating \$953,000 in income. The seedlings include trees and shrubs suitable for reforestation and wildlife-habitat restoration activities. The seedlings are planted on both public and private land throughout the state. Of the almost 12,000 orders involving more than 40,000 packages of seedling trees, fewer than 30 orders were filled incorrectly. This amounts to a customer satisfaction rate of more than 99 percent.

## Storm-damaged timber

On May 8, 2009, a severe storm impacted the southern half of Missouri. MDC classified 113,308 acres across all ownerships as having moderate to severe blow-down damage. A conservative estimate of 204 million board feet of volume was damaged. At least twice this many acres were affected and had some damage. This is approximately one-third of Missouri's annual forest-products harvest.

On MDC lands, approximately 13,000 acres were impacted and damaged-timber volume was estimated at 33 million board feet. In FY10, salvage sales were active on six conservation areas covering a total of 28,071 acres. To date, 18.9 million board feet have been salvaged, bringing in \$1.5 million in revenue to MDC. Salvage operations will continue on these acres into FY11.

An estimated 68,102 acres was affected on private land, resulting in 123 million board feet of timber damaged.

## Wildfire prevention

By way of endorsing a third-party US Forest Service Hazard Mitigation grant to the Southwest Resource Conservation and Development Program, MDC supported an effort to promote wildfire prevention in southwestern Missouri. This area was severely hit by the January 2007 ice storm and a subsequent tornado. Heavy wood debris in the forests of this area makes wildfire suppression much more difficult and hazardous to firefighters. Educating residents about the increased risk of fire and how to properly manage or dispose of their ice-damaged trees helps reduce fuels in areas where trees were devastated by the storms.

Funding for fire departments working with communities to implement the Firewise program is included in this grant. Fire departments are compensated for working with local communities to perform risk assessments and to apply practices to reduce their fire risk.

## Missouri Ozark Forest Ecosystem Project

The Missouri Ozark Forest Ecosystem Project (MOFEP) is a landscape-scale, long-term experiment designed to study the impact of even-aged, uneven-aged and no-harvest management on flora and fauna in Missouri oak-hickory forests. Project components include determining the effects of

forest management on bird, reptile and amphibian communities, small mammals, insects and vegetation.

MOFEP helps resource managers adjust and improve their management systems during the course of the project. Results thus far suggest that harvesting did not adversely affect bird, amphibian, reptile or small-mammal species, but it reduced insect herbivore diversity. Harvested sites had greater species richness and ground flora cover, including soft mast, than no-harvest sites. Even-aged and uneven-aged management increased soft mast production. Uneven-aged management increased harvest damage. Economic benefits between even- and uneven-aged management were similar.

Our understanding of the effects of management prescriptions on ecosystem components and the value of the data derived from MOFEP will grow as we continue to monitor studies in the long term.

### Effects of even-aged forest management on early successional bird species—

The effects of different clear-cut sizes on species richness, abundance and reproductive success of birds were evaluated on the MOFEP study sites. Species richness was higher in larger clear-cuts than in smaller openings, and size had a significant effect on the abundance of four species: yellow-breasted chat, indigo bunting, white-eyed vireo and prairie warbler. There was no observed relationship between clear-cut size and reproductive success, but this study confirmed that the rate of brown-headed cowbird parasitism is low on the MOFEP sites. The results of this study suggest that it is beneficial to have a variety of sizes of openings when designing forest management plans.

**Ground flora—**While the use of prescribed fire is generally considered key to woodland management, it is not possible or practical to use fire in all of the woodlands we manage. The Missouri Ozark Forest Ecosystem Project (MOFEP) is helping to determine if timber management alone can maintain woodland ground plant biodiversity. Based on research conducted from 1993 to 2009, we found that stands on which trees were not harvested were exhibiting decreases in woodland plant species richness and cover. Stands that were thinned in 1996 showed increases in species richness and cover but conditions returned to pre-thinning levels by 2009. Forest stands that had been clear-



cut showed large gains in woodland plant species richness and cover following the 1996 treatment. Woodland plant species richness remained 18 percent higher by 2009, but cover had declined to levels below 1996 because of the shade created by dense stands of young growing trees. These results indicate that the short-term gains in woodland plant species diversity within clearcuts were rapidly lost without further management.

### **Master Logger Certification**

MDC continues to support Missouri Master Logger Certification. To participate, loggers agree to uphold the standards set by the program. We awarded a \$7,000 grant to the Missouri Forest Products Association (MFPA) to aid the program. In FY09 three on-site verifiers were trained by MFPA. The verifiers looked at some of each applicant's past sales to confirm they were in compliance with the Missouri Master Logger Certification Program criteria. The verifiers' findings go to the certifying board, which decides if the logger should be in the program. This is a performance-based program for which loggers can be removed if they do not uphold the standards. Two individuals were inducted into the program in FY10.

The certifying board is composed of a state legislator, a wildlife professional, a master logger from another state, a soil scientist, a representative from an environmental organization and MDC.

This program gives an outstanding logger an opportunity to be recognized and their skills showcased. It is hoped that landowners would be encouraged to engage these loggers to harvest their timber sales. The state's fish, forest, wildlife, soils water and air are better protected when harvesting is done by a certified logger.

### **Monitoring forest health**

The Forest Health Program is a cooperative effort among MDC and other state and federal agencies to conserve Missouri's forest resources by monitoring and evaluating forest health and providing forest health management information to Missouri residents. Primary threats to forest health in Missouri are oak decline, oak wilt, sporadic insect outbreaks, weather-related disturbances and introductions of exotic invasive species.

Activities that help us prepare for and respond to invasive species threats comprise a major portion of our Forest Health Program. Our primary concerns include the spread of gypsy moth, emerald ash borer, thousand cankers disease of black

walnut and other pests in firewood. MDC works in partnership with other state and federal agencies to develop response plans, reduce pest introduction risks, detect introductions and provide pest management expertise. We develop materials and presentations to raise public awareness about invasive species threats.

Citizens are encouraged to report suspected infestations through a toll-free phone number, a website, or a dedicated e-mail address (*forest.health@mdc.mo.gov*). These reports are investigated by Forest Health staff. During the past year, we have placed an increased emphasis on raising awareness of the threat of pests hitchhiking in firewood and developing multi-agency policies to address this threat. In addition, staff have participated in development of a national thousand cankers disease response plan.

The Forest Health staff also provides diagnostic services on all forms of forest insect and disease agents. Forest and pest management recommendations are developed based on monitoring and diagnostic activities and provided to private landowners, MDC, forest managers, arborists and the green industry. Forest health information is also made available through workshops, diagnostic reports, magazine and website articles, media releases and newsletters.

### **Timber harvesters**

We work closely with Missouri's forest products industry to monitor the use of our state's forest resource. The Missouri Forest Products Association and MDC sponsor logger training courses about forest-management principles, introducing new techniques and concepts, and enhancing safety. Ten workshops were held across the state, training 109 loggers in FY10. These 109 join 135 others for a total of 244 trained loggers in Missouri.

### **Prescribed fire summit**

MDC held a summit to identify and discuss the current and future issues facing prescribed fire in Missouri.

Approximately 50 individuals attended the summit, representing 25 or more groups. A core group was identified that have the greatest involvement in prescribed fire. A general agreement was reached that organizing a prescribed fire council would more effectively address prescribed fire issues. The summit ended with a statement of encouragement from Conservation Federation of Missouri supporting the develop-



ment of a Missouri prescribed fire council. Several non-governmental agencies were identified as possible leads for organizing and administering the council.

### **Logger of the Year**

Matt L'Heureux from Piedmont was selected as the MDC State Logger of the Year for 2010. Matt was honored at the Missouri Forest Products Association summer meeting at the Lake of the Ozarks. Each year foresters from all over the state nominate loggers that excel in their profession. This year Woody Haynes from Winona was chosen as the Ozark Regional Logger of the Year and Matt L'Heureux from Piedmont was selected as the MDC Southeast Regional Logger of the Year.

Criteria for choosing a logger for the award require evaluating several areas. Some of the criteria include: having a good working relationship with landowners and foresters, achieving minimal damage to remaining trees and resources, managing a harvest that prevents soil erosion and desirable aesthetics of the site after harvesting was completed, working safely and demonstrating proper use of equipment, maximizing the utilization of harvested trees, addressing wildlife management concerns, and demonstrating proper use of forest management techniques. In order to be considered, loggers must complete the Professional Timber Harvester's Training Program sponsored by the Missouri Forest Products Association and MDC.

### **Shortleaf pine restoration**

Shortleaf pines were once a big part of the forest in the Missouri Ozarks. Extensive logging, frequent wildfire and over-grazing by cattle led to the loss of pine and a forest now dominated by oaks. Shortleaf pine has not made a comeback because there are few mature pine seed trees and because the oaks have outcompeted the pines. Now that managers are harvesting large tracts of black and scarlet oak because these species are too old and declining in health, they have recognized an opportunity to restore natural pine-oak communities. A prime tract of land for this management is at Peck Ranch Conservation Area. Three methods used to encourage seedling pine growth included: prescribed burning, herbicide treatments, and mechanical removal. Preliminary results indicated that pine seedlings were growing into saplings in treated areas.



## **Preserving Missouri's Outdoor Recreation Heritage**

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### **Trout Habitat at Maramec Spring Park**

Trout anglers found new trout habitat waiting at Maramec Spring Park when they returned in March. MDC installed 15 new habitat structures in the lower portion of the Maramec Spring Branch last winter. Rosati Sandstone, a local quarry, donated a load of native sandstone boulders.

### **Catfish**

The Catfish Harvest Evaluation Project is a five-year statewide study that began in 2005 and is designed to provide information about the population dynamics, harvest rates, movement, nest success and fecundity (eggs per female) of flathead and blue catfish in selected Missouri rivers. From 2005 to 2008, MDC biologists sampled catfish in segments of eight rivers throughout Missouri and tagged fish with \$25 and \$150 reward tags. Preliminary results from tags returned by anglers form the basis for future decisions about catfish regulations.

### **Operation Game Thief and Forest Arson**

Operation Game Thief/Forest Arson continue to be successful programs that help catch wildlife poachers and forest arsonists. The programs allow anonymous callers to report violations, and callers are eligible for rewards if arrests are made from their calls. Last year Operation Game Thief (OGT) produced 354 convictions from 1,183 telephone calls. This 30 percent arrest rate based on calls illustrates the high-quality of information from OGT callers and the investigative skills of conservation agents. In calendar year '09, \$10,450 in reward money was paid to callers.

### **Interstate Wildlife Violator Compact**

Missouri is a participating state in the Interstate Wildlife Violator Compact (IWVC). The compact—an organization of 35 member-state wildlife agencies—agrees to reciprocally honor revocations/suspensions of hunting, fishing and trapping privileges for wildlife-related violations.

During the past fiscal year, 1,750 people from other states had their privileges revoked in Missouri through the compact. An additional 133 were

revoked for cause by the Conservation Commission in Missouri and submitted to the IWVC. Participation in the compact also benefits Missourians who travel to other compact member states for hunting and fishing activities. If found in violation, they may be given the opportunity to resolve the citation by mail rather than being required to post a bond before leaving the member state. They are subject to revocation by all compact states if the citation is ignored.

### **Regulations changes benefit anglers**

Requiring anglers to watch their unanchored jug lines helps reduce catfish waste and jug-line litter. However, to allow anglers to put out jug lines in several locations on a lake, unanchored jug lines must be personally attended at least one time per hour instead of the entire time the jug line is set. On streams, however, jug lines still must be personally attended at all times.

At the request of people interested in bowfishing tournaments, MDC now allows bowfishing 24 hours a day on rivers where commercial fishing is allowed. These rivers include: the flowing portions of the Missouri River, the Mississippi River (except in Sand Chute below the mouth of the Salt River in Pike County, and that part of the St. Francis River which forms a boundary between the states of Arkansas and Missouri), and also waters which exist temporarily through overflow from the Mississippi River east of the Missouri Pacific Railroad between Cape Girardeau and Scott City, and east of the Mississippi River mainline and setback levees between Commerce and the Arkansas state line. Since the floods of 1993, populations of exotic Asian carp have been expanding into Missouri's big rivers. To make it easier to harvest these species, some of which jump into boats, anglers can now take bighead, common, grass and silver carp by handnet and can keep those that jump into a boat or on land. These fish can be possessed in any numbers.

### **More hunting and fishing opportunities**

During the past fiscal year, we issued 3,721 hunting-method exemptions to help disabled hunters enjoy Missouri's outdoors. We also issued 385 group-fishing permits to help Missourians who otherwise might not be able to participate and learn about outdoor fishing activities.

### **Angler recognition**

MDC presented a First Fish certificate to 909 anglers. We issued Master Angler awards to 393 anglers who caught large game fish that equaled or exceeded minimum-size requirements. We also issued new state records to anglers catching flathead catfish, blue catfish, striped bass, brown trout, skipjack herring and white sucker.

### **Kids' Fishing Days at the trout parks**

For the eighth consecutive year, Kids' Fishing Day was held at the trout parks. Combined attendance of those 15 years of age or younger at the May 2010 event held at Bennett Spring, Maramec Spring, Montauk and Roaring River was 3,279. In spite of bad weather, the Kids' Fishing Day remains popular.

### **Urban fishing**

MDC strives to provide high-quality fishing opportunities for all Missourians, including those living in urban areas. With our current economic conditions, it has become even more important to provide close-to-home fishing opportunities. During 2009, more than 53 urban lakes were managed for fishing. More than 144,000 keeper-sized fish were stocked in these lakes; this included 93,538 channel catfish, 47,534 rainbow trout and 3,213 brown trout.

### **Warm water fish hatcheries**

MDC's warm water hatcheries produced enough fish to meet stocking needs in Missouri and provide fish for trading to other states in 2009. By the end of 2009, 8.9 million fish were stocked in public and private waters. Among some of the highlights of this past production year, Lost Valley and Blind Pony hatcheries collectively produced 400,000 hybrid striped bass for Missouri reservoirs. Blind Pony produced 1.5 million bluegill for statewide distribution and stocked 3,668 pallid sturgeon. Chesapeake Hatchery produced more than 1 million channel catfish, some of which were sent to other hatcheries for grow out; others were sent to Iowa in exchange for musky. Hunnewell Hatchery produced more than 230,000 walleye fry. Paho Fish Rearing Station also contributed more than 75,000 stocking-sized channel catfish for public waters. Several hatchery improvement projects continue to span multiple years. These projects include installation of new kettles and aerators on

the 1.5-acre ponds at Blind Pony. The 1-acre ponds are scheduled for similar renovations in 2010. Lost Valley continues to receive new underliner drains in the production ponds. Hunnewell's intake structure was replaced.

## **Walleye**

Walleye are a popular fish species for Missouri anglers. However, without supplemental stockings, the number of walleye in Missouri lakes is usually at a level unacceptable to anglers. The annual collection of wild walleye to maintain our hatchery production is an integral part of Missouri's walleye management. This year mature walleye were captured from Bull Shoals and Lake of the Ozarks and transported to Lost Valley Hatchery and Chesapeake Hatchery. The quality of these fish was excellent and hatcheries had a good year of walleye production. We also sent 747,000 surplus fertilized eggs to Arkansas Fish and Game Commission. More than 4 million walleye fry and 2 million fingerlings were stocked in Missouri lakes and one river.

Walleye populations in several lakes appear to be growing. The most notable lakes are in the Kansas City and Northwest regions. Biologists are receiving positive reports from anglers in these regions regarding their higher success in catching walleye. MDC continues to evaluate the walleye population. The new walleye management plan was completed and is available on the MDC website.

## **The Fall Classic of Fish Culture**

The Lake Paho Rearing Station and Chesapeake Hatchery host these annual fish harvest events to distribute 8- to 12-inch channel catfish across Missouri. In the fall of 2009, it took four days to harvest and distribute more than 140,000 catfish to more than 250 stocking locations from the two facilities.

## **Renovations at coldwater hatcheries**

A variety of construction projects continued at MDC's coldwater hatcheries. A new feed building was completed at Roaring River Hatchery and the office building underwent a major renovation. Construction began on major raceway renovations and at the new production building at Bennett Spring Hatchery. Round pool renovations were completed at Maramec Spring Hatchery. Planning

is currently underway for an auxiliary pipeline to provide back-up water supply from Table Rock Lake for Shepherd of the Hills Hatchery.

The main water supply received by the new brown trout facility was recently enhanced to address water quality issues that had developed. This complex utilizes re-use water from 24 existing hatchery raceways. Re-use water is generally characterized by a parasite load shed by fish, fish waste including solids and ammonia and less available oxygen. The earthen basin between the existing hatchery and brown trout facility was used to promote settling of the suspended solids, but this did not occur due to high water velocity which resulted in higher than anticipated quantities of suspended solids and organic material entering the brown trout facility. A screen at the end of the settling pool designed to catch this debris was overwhelmed on a daily basis. As a result, water received by the new facility was littered with suspended solids, algae and parasitic organisms. The combination of the three entering the facility produced many challenges in fish production.

A construction project designed to eliminate the organic debris load and reduce the amount of suspended solids in water flowing into the brown trout facility has been completed. This project was completed in February 2010 and improvements were immediately observed in the water supply. A portion of the suspended solids are settling in the basins and the organic material has been eliminated. Ultraviolet units were also installed in the brown trout building to further eliminate the parasitic organisms entering the fry and fingerling tanks. This new system will aid in the prevention of disease and clogged screens and help maintain biosecurity protocols at Shepherd of the Hills Hatchery. These projects, along with a variety of completed projects and smaller, ongoing projects, are enhancing our production capacity and efficiency in our coldwater hatcheries.

## **GO FISH! success**

In 2010 the GO FISH! program increased in popularity while maintaining quality. GO FISH! programs ran at four local conservation fishing centers—August A. Busch Memorial Conservation Area, Bellefontaine Conservation Area, Forest Park Hatchery and Suson Park Rearing Pond. The seven GO FISH! "hooks" were provided at each fishing center, while revamped urban fishing camps took place at Forest Park with children from the St. Louis City Parks and Recreation summer program.



April through August, GO FISH! reached more than 1,827 contacts during 110 programs, thanks to the help of 46 volunteers who provided 1,185 hours of service. Sixty-seven percent of programs were filled to capacity. GO FISH! graduates were surveyed revealing that 89 percent fished outside of the GO FISH! programs in 2009 and 74 percent of parents/guardians purchased a fishing license to fish with the graduate. This illustrates the value of GO FISH! for recruiting and retaining anglers.

GO FISH! continued several successful partnerships in 2010, while creating some new partnerships. AVALA, a St. Louis-based marketing company, helped create the Friends of GO FISH! The Friends of GO FISH! is a grassroots effort to gain more public awareness and support for GO FISH! AVALA has created a Friends of GO FISH! website and Facebook page where GO FISH! participants can share pictures and fish stories. AVALA also formed a relationship with the Missouri Conservation Heritage Foundation (MCHF) to link the Friends of GO FISH! website with the MCHF website to generate more donations. All of AVALA's time and resources are donated. Efforts continue to copyright the GO FISH! logo and publications.

### **Archery in schools**

Missouri students in grades 4–12 learn target archery in class in the Missouri National Archery in the Schools Program (MoNASP). The number of schools enrolled in the program has doubled each year since MoNASP began in 2007. There are now 121 schools in the program. As of this year, more than 20,000 students have participated in MoNASP, which has proven to improve kids' lives not only at school, but at home and in the community. Many schools received reimbursement grants up to \$500 toward NASP-approved archery equipment. This year two regional MoNASP tournaments were held in Springfield and Kansas City and more than 670 students participated in the state tournament at Linn State Technical College. For the past two years, Missouri kids have also participated in state, national and world NASP tournaments. In May 2010, at the NASP national tournament in Louisville, Ky., Colton Fry, a student from Salem, tied for 6th Grade National Champion.

### **New hunters and anglers**

MDC and volunteers provided more than 2,400 programs with instruction in hunting, fishing, trapping and shooting sports. More than 126,000

people took part in these programs, which were aimed at increasing participation in and knowledge of traditional outdoor recreation. We offered about 900 Hunter Education classes, certified 24,733 students and began an online Hunter Education training. The online course, coupled with a five-hour field day, provides an alternative to the traditional 10 hours of lecture. It offers flexibility to busy people who want to meet the Hunter Education requirements. More than 130,000 visitors attended programs or practiced firearms and archery shooting at our five staffed shooting ranges and 75 unmanned shooting ranges.



## **Teaching Missourians About Fish, Forest and Wildlife Resources**

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### **Grassland Evaluation contests**

The Mid-America Grassland Evaluation Contest is a national success born from partnerships; partnerships that have existed for more than two decades. It's a fun way for students to learn about grassland and wildlife management. Despite the challenging economic times, 23 FFA and 4H grassland management teams managed to travel to southwest Missouri from across the country to compete. Grassland experts from across the nation invested limited resources to come. The knowledge imparted to the participants will provide management experience to benefit the nation's grassland resources.

In October, FFA and 4H teams competed in district and state Grassland Evaluation Contests. District contests were held in six regions with the top teams competing for the state championship in Columbia. Teams rated fields and plots for their condition, soil and wildlife value, and identified plants. The contest is a cooperative effort between MDC, Natural Resources Conservation Service, University Extension and the Soil and Water Conservation Districts.

### **Missouri Forestkeepers Network**

The USDA Forest Service's State and Private Forestry program awarded a \$70,000 grant to MDC to facilitate outreach to Missouri landowners who own fewer than 60 acres. This project was implemented in partnership with Forest ReLeaf of Missouri through an annual cooperative agreement supporting the Missouri Forestkeepers Network



(FKN). The FKN program is a volunteer, self-driven network of people interested in forests and forest monitoring.

More than 2,400 individuals, groups and organizations were enrolled in the program in FY10. Members contributed 11,363 hours of volunteer time which can be valued at \$236,918 using the Independent Sector's value for volunteer time.

In FY10, FKN focused efforts in 13 counties that were selected based on rapid forest parcelization, population growth, proximity to large communities and location in the state. Those 13 counties were Lincoln, Warren, Christian, Cass, Platte, Phelps, Boone, Camden, St. Francois, Franklin, Jefferson, Ray and Webster. Letters were sent to all landowners owning between 10–60 acres of land in these counties, encouraging them to participate in the FKN program. Nearly 350 landowners joined.

In addition, The Heritage Woods program was developed to appeal to landowners who are not interested in or not eligible to participate in other recognition programs.

### **Fire-suppression training**

MDC supports volunteer fire departments in many ways. One way in particular is by providing annual wildland fire-suppression training to fire departments throughout the state. We conducted 28 sessions and trained more than 534 local fire-fighters in fire behavior, suppression techniques and safety at no cost to the fire departments or the volunteers. In addition, we also provided instructors and logistical support for the Midwest Wildfire Training Academy held in Jefferson City each year. This academy draws thousands of participants from throughout the state and the Midwest.

### **Discover Nature Schools**

Discover Nature Schools helps teachers engage students in hands-on, outdoor, place-based learning. In 2010, more than 39,000 Missouri children were connected with nature through various Discover Nature Schools instructional units and grants. Thus far, 104 schools adopted the middle-school aquatic unit, 109 schools taught the elementary habitats unit, and 91 schools engaged students in learning about Missouri's fish, forest, wildlife or natural habitats through our Conservation K–3 Field Trip Grant. This year a high school ecology unit, Nature Unbound, was completed, and a kindergarten through second-grade unit is in development.

Along with student books and teacher guides for each unit, we provide grants for exploration equipment, outdoor classroom materials and field experiences. Conservation grants supporting Discover Nature Schools totaled \$134,724 and provided multiple opportunities for students to enjoy and learn about nature in nature.

### **Free trees promote awareness of forests**

In conjunction with the Missouri Department of Transportation, we provided free trees to many nonprofit groups. Scout troops, stream teams, school groups, conservation groups and communities used them for tree-planting projects in both urban and rural areas. This program enhances the ability of both agencies to promote an awareness of Missouri's forests and to increase citizens' understanding of the many benefits trees provide.

For Arbor Day 2010, we distributed rough-leaved dogwood seedlings to more than 109,000 fourth-grade students throughout the state.

### **Citizens enjoying nature**

More than 850,000 visitors explored the trails, programs and exhibits at our conservation nature and education centers throughout the state. Discover Nature programs for women and families provided special opportunities for Missourians to learn new ways to enjoy the outdoors—whether it's how to fish, how to attract bluebirds or how to find their way through the woods.

### **Grow Native!**

Grow Native! is a program of the Missouri departments of Conservation and Agriculture, with help from the Missouri Botanical Garden's Shaw Nature Reserve. Workshops for the general public and landscape professionals continue to be an important part of the program. However, an emphasis this year has been the education of civil engineers and contractors in metropolitan St. Louis, where an increased emphasis is being placed on the ability of native plants to slow stormwater runoff and improve water quality. Also noteworthy is the completion of an industry survey that shows sales of native plants in Missouri increased 70 percent in the five years between 2003 and 2008.

### **Master Naturalist**

The Master Naturalist program conducted six training courses last year, adding another 200 participants to this community-based, volunteer

service program that totals 680 people and 11 chapters. With a new chapter starting in Franklin County, the program has what's considered its first regional chapter association in the St. Louis area. A new chapter also started at the Lake of the Ozarks. Volunteers participated in more than 5,000 hours of advanced training and donated more than 20,000 hours of volunteer service.



## **Supporting Conservation in Our Communities**

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### **Volunteer fire departments**

MDC, in cooperation with the USDA Forest Service, provided \$298,894 in grants to 144 volunteer fire departments. These grants help fund protective clothing, equipment and training.

We also provided equipment to fire departments through two federal programs. With the Federal Excess Property Program, which we are phasing out, we obtained equipment valued at \$189,205. The new Fire Fighter Program obtained equipment valued at \$15,515,088.

### **Community Assistance**

Through the Community Assistance Program (CAP) and the closely related Corporate and Agency Partnership Program (CAPP), MDC enters into agreements (usually 25-year) with cities, counties, state and federal agencies, businesses, foundations, schools and colleges. Under these agreements, MDC provides fisheries management at existing lakes and ponds and cooperatively develops and maintains facilities for anglers and boaters at lake and stream areas. MDC has agreements with 117 partners for the cooperative management of 170 public lakes (9,679 acres of water), 42 stream-access areas, four lake-access areas and eight aquatic resource education ponds.

MDC and its partners constructed fishing and motorboat access facilities at Lake Remembrance (Blue Springs, Jackson County), Spur Pond (Kirksville, Adair County), City of Pineville Elk River Access (Pineville, McDonald County), Sugar Creek Lake (Moberly, Randolph County), A. Perry Philips Park Lake (Columbia, Boone County), Hamilton City Lake (Hamilton, Caldwell County) and Suson Rearing Pond (St. Louis County). MDC executed new agreements with Fulton (Callaway County, three lakes, 13 acres) and Jackson (Cape Girardeau

County, one lake, 2 acres) for cooperative management of public fishing; renewed the agreement with Kirksville (Adair County, one lake, 530 acres) for facilities development and cooperative management; and amended existing agreements with four partners to provide for facilities development.

### **Venison donation**

Conservation agents coordinate and support the Share the Harvest program with the Conservation Federation of Missouri, local charitable organizations and local meat processors. Together these groups have supported the donations of more than 234 tons of meat during the past two years. During FY10, approximately 4,450 hunters donated 205,153 pounds of venison to less-fortunate Missourians. Since the inception of the program, nearly 1.9 million pounds of deer meat have been donated to Missouri citizens. Hunters who wish to donate their entire deer may receive a \$40 reduction in the processing price. The \$40 is paid by the Conservation Federation of Missouri. Hunters also may designate part of their deer to be donated to the Share the Harvest program.

### **Agent outreach efforts**

Conservation agents represented MDC at 5,244 meetings with civic groups, schools, church groups and a wide variety of other organizations. Agents completed 6,437 radio and television programs, published 3,206 newspaper articles and conducted 1,461 public exhibits. As part of their community relations efforts, agents contacted more than 497,573 citizens and answered 120,409 telephone calls.

### **Community conservation planning**

Community Conservation Planners (CCPs) help cities create quality habitat for people and nature. They work with local governments, organizations, developers and citizens to integrate natural resources with the built environment to the benefit of both. Missouri's fish, forests and wildlife face habitat loss and fragmentation due to conventional development practices. Only when conservation needs are a key part of planning for community growth can we protect these valuable resources and improve the quality of life for present and future Missourians.

Information and technical assistance provided by CCPs promote land-use planning, design practices and technologies that conserve and protect

natural systems. These alternatives reduce habitat fragmentation, restore and preserve natural landscapes, protect watersheds and create opportunities for urban citizens to use, enjoy and learn about wildlife, forest and aquatic resources within their own communities.

Relationship building with professional planning and development organizations such as the American Planning Association, American Society of Landscape Architects, and the American Public Works Association is a critical component in the effort to educate others on how to incorporate conservation-friendly development practices into the urban landscape. CCPs maintained relationships with such groups by speaking at workshops and conferences, attending networking meetings, participating on interagency event committees and partnering on projects.

CCPs made 2,193 contacts with community organizations and local governments; represented MDC at 94 committee and initiative meetings; participated in conservation efforts in 12 conservation opportunity areas; and handled 1,145 general and technical inquiries. They reviewed and provided input on 33 development projects; provided plans or recommendations for 250 acres in urban communities; and assisted with the implementation of plans on 51 acres.

CCPs presented 20 programs that drew 998 participants; provided expertise and support at five special events that drew more than 11,800 people; and participated in eight media efforts, including publications, that reached countless others with information about conservation of fish, forest and wildlife resources in urban and developing areas.

### **Outstanding stewards of our forests**

MDC and the Missouri Community Forestry Council jointly sponsored the Missouri Arbor Award of Excellence program. This program recognizes those throughout the state that act as good stewards of their tree resources. Award categories include municipalities/governments, organizations, individuals, and businesses. Those earning recognition in FY10 for their sustained effort to care for our community forests include the city of Sunset Hills, the city of Creve Coeur, Empire District Electric Company, Chris Veach, and Little Creek Natural Area. In addition, the Barat Academy High School's Service Learning Program and Betsey Brass were recognized with Citations of Merit.

### **Fuels for Schools Grant**

Nearly \$6 million in grants will help selected school districts reduce energy costs, create jobs and help forest through use of wood products for heating and cooling. MDC in cooperation with the USDA Forest Service's State and Private Forestry program awarded nearly \$6 million in grants to six public school districts for "Fuels for Schools" projects. The grants are being funded through the American Recovery and Reinvestment Act.

These grants will fund the installation of woody biomass boiler systems in schools in an effort to demonstrate small-scale bioenergy use and to demonstrate how this type of technology can lead to healthier forest conditions. Grant recipients were selected based on economic needs, dependence on the forest products industry, project feasibility and the ability to implement the project quickly, proximity to the public and private forestland and partnerships with other public entities that could benefit from the biomass energy system.

Schools selected to receive a grant include Perry County 32 School District, Steelville R-III School District, Gainesville R-V School District, Eminence R-1 Elementary, Southern Reynolds County R-II School District, and Mountain View—Birchtree Liberty High School. This grant does not require a match from the school district. By the end of the fiscal year all of the schools had hired architects and engineers to design a system that fit their unique needs. It is anticipated that all of the projects will begin and complete construction in FY11.

### **Communities interested in tree care**

Interest in the Tree Resource Improvement and Maintenance (TRIM) cost-share program continues to be strong as Missouri towns have experienced a string of severe weather events over the past three years. The damage that publicly owned trees have sustained from the string of ice storms, high winds, flooding and/or straight-line winds has been phenomenal and has generated increased interest in tree care.

In FY10 we received 67 applications requesting more than \$500,000 in funding. A total of \$299,000 of MDC dollars was spent funding the 40 best applications. Successful applicants receive 60 percent or 75 percent of their total project in cost share within specified limits. The balance of the project was provided by the applicant as the



local share. In FY10 applicants matched the MDC contribution by 52 percent providing \$326,337 in local match.

### **St. Louis Stewardship grants**

The Community Stewardship Grant Program (CSGP) received 12 grant applications, requesting a total of \$74,868.72. The CSGP Advisory Committee was comprised of six individuals from area agencies and organizations that did not submit grant proposals. This year, the CSGP awarded \$43,448.72 to fund eight grant projects:

**The Green Center, Brittany Woods Prairie and Wetland Restoration, \$6,750—**Funds are being used to restore the 2-acre prairie and half-acre wetland on Brittany Woods School property, which will enhance the habitat and connectivity of the University City's Ruth Park Woods and Urban Bird Corridor. The project has strong support from University City Parks Department and School District, as well as a committed base of volunteers.

**St. Louis Audubon Society. Creve Coeur Park Upland Forest Restoration. \$7,312.00—**St. Louis Audubon Society and St. Louis County Parks are removing honeysuckle from 4.5 acres and planting understory trees and shrubs in an additional 4 acres of upland forest in the County's Creve Coeur Park. This area is defined as an Important Bird Area in St. Louis; the primary objective of the restoration is to improve habitat quality for songbirds.

**Greenway Network. Towne Park Habitat Restoration. \$7,075.00.** Greenway Network and St. Charles County Parks are cooperating to restore a 20-acre prairie and 2,200 lineal feet of edge habitat on this newly acquired County Park property. This project has significant in-kind and matching support from partners and volunteers.

**Tyson Research Center. Glade Restoration in West Tyson County Park. \$7,500.00.** This is a cooperative effort between Washington University's Tyson Research Center, St. Louis County Parks, and Shaw Nature Reserve. Staff and contractors will cut cedar and restore a 2.5-acre glade in this St. Louis County Park. It will be one of the few restored glade habitats in highly urban St. Louis County.

**City of Sunset Hills Parks and Recreation, Timber Stand Improvement in Claire Gempp Davidson Conservation Area. \$7,500.00.** The primary objective of this project is to improve forest quality on portions of the 13.5-acre Gempp Conservation Area, owned by MDC and leased to the City of Sunset Hills. The City has removed and managed honeysuckle for the past five years. Based on recommendations from MDC, they are striving to thin aging and undesirable tree species and replant understory trees on the area. The city and the Lindburgh School District committed funds and resources to the project.

**Ladue Middle School, Rain Garden and Invasive Species Removal. \$1,061.82.** School staff and volunteers will establish a rain garden and remove honeysuckle from areas of the school property.

**Bethany-Peace Church, Bethany-Peace Prairie Restoration. \$2,500.00.** Funds were used to seed a one-acre prairie area on the church property which was converted from turf grass. This project has strong volunteer support.

**Trailnet, Greening the Confluence: Mississippi River Corridor Clean-Up, Habitat Restoration, and Environmental Education. \$3,750.00.** Funds will be used for native seed and plants to restore portions of a 35-acre riparian forest and a 50-acre prairie along the Mississippi.

### **Kansas City deer management**

MDC orchestrates 89 archery deer hunts in Kansas City, Missouri on approximately 14,600 acres of private and city-owned land. Around 500 hunters participated in the hunts and harvested 432 deer. The partnerships aid in urban deer management issues and increase hunt opportunities for the public.

### **Kansas City WildLands**

Kansas City WildLands (KCWL) conducted volunteer habitat restoration work on a total of seven remnant natural community sites in the greater Kansas City area. More than 850 individual citizen volunteers from all over the country as well as corporate volunteer groups participated in three multi-site community restoration workdays. An additional 11 single-site workdays took place during FY10. KCWL program logged 3,398 volunteer



hours and received a total of \$16,167 cash and in-kind donations. A portion of the in-kind donations included 4,200 seedlings grown by Powell Gardens from seed collected by volunteers.

### **Communities recognized for tree care**

In partnership with The National Arbor Day Foundation, MDC recognized 77 municipalities as Tree City USA communities. Four Standards must be met in order for a community to be certified as a Tree City USA. Those four Standards are: 1) Have a tree board or forestry department; 2) Adopt an ordinance which outlines how trees on public property will be managed; 3) Spend a minimum of \$2 per capita on tree management; and 4) Celebrate Arbor Day. Most Missouri communities far exceed these basic requirements with the average spent on tree care \$8.23 per capita. A little more than 42 percent of Missouri's population lives in a Tree City USA community. Communities participating in this program range in size from Kansas City, with a population of 441,545, to Augusta, with a population of 218. Fifteen communities invested time and effort to initiate or significantly improve existing tree programs, earning a Tree City USA Growth Award.

### **Utility providers recognized**

In partnership with The National Arbor Day Foundation, MDC recognized 11 utility providers as TreeLine USA companies. Four Standards must be met in order for a utility provider to receive certification. Those four Standards are: 1) Adoption of written standards outlining how trees will be managed; 2) A formal training program for employees on proper tree care to assure the adopted standard is implemented; 3) Undertaking outreach and education including celebration of Arbor Day, mailings to customers with tree management information, and adoption of a tree replacement program.

### **Missouri Community Forestry Council**

The Missouri Community Forestry Council (MCFC), with financial and technical assistance from MDC, continued to actively support community forestry programs in the state. MCFC played a big part in utilizing volunteers to educate the public about community forestry programs. The organization's primary focus this year has been on obtaining self-sufficiency and improving the skill level of municipal tree managers.

MCFC's annual conference was held in Chesterfield. The close proximity of St. Louis attracted 156 people. Educational activities this year include: maintenance of the organization's website, improving and hosting the statewide Arbor Day Poster Contest for fifth-grade students, and displaying materials at statewide events like the Missouri Municipal League annual conference. The Cityscape newsletter continues with a volunteer editor. The Council's public service campaign Experts Agree Don't Top Your Tree continues to thrive with the production of an updated brochure and focused outreach in two target areas of the state.



## **Helping Private Landowners Advance Conservation**

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### **Bradford Farm**

Since 2004, MDC has collaborated with University of Missouri Bradford Farm to develop quail-friendly demonstrations and management practices.

Bradford Farm staff not only establish and maintain the demonstration plots, but also prepare and conduct an annual quail field day each June to promote the farm's demonstration areas. About 150 people come each year from all across Missouri and several neighboring states to the field day. But the information transfer does not stop after the quail field day. Bradford Farm staff give tours that include the wildlife demonstrations to more than 5,000 other agriculture producers and agriculture industry representatives throughout the year. We have reaped additional dividends with this partnership as the farm now has established a field border study to promote the economics of wildlife field borders to farmers. They are also involved in a number of biofuels studies looking at wildlife-friendly mixes of biomass crops.

MDC's role in the partnership comes primarily in the form of providing planning assistance to Bradford Farm staff for quail habitat restoration. We staff some of the tour stops during the field days and provide input for studies being conducted on the farm.

## **Financial assistance for landowners**

Approximately 328 private landowners received nearly \$520,000 in cost-share funds to implement beneficial habitat-management practices for fish, forest and wildlife resources. The funds helped install 549 individual conservation practices, impacting nearly 9,000 acres.

## **Wildlife Damage Management**

The Wildlife Damage Management Program provides technical advice to landowners experiencing wildlife conflicts. This is done through phone calls, mailings, workshops and on-site visits. This program directly serves more than 4,000 Missouri landowners annually.

Wildlife damage management was also furthered through projects such as the Cable Restraint Program, otter and black bear research, and other special projects. The program also represented MDC on committees such as the Nuisance Urban Goose Implementation Team, River Otter Task Force and the Feral Hog Task Force and the Mountain Lion Response Team.

The Wildlife Damage Management Program maintains relationships and partners with other agencies and organizations. These include the Missouri Trappers Association, USDA/Animal and Plant Health Inspection Service—Wildlife Services, Missouri Department of Agriculture, Missouri Department of Natural Resources and the USDA Forest Service.

## **Purple loosestrife control**

The annual Purple Loosestrife Control Program helps to keep the impact of invasive wetland plants to a minimum. During 2009, MDC worked with private landowners in the Kansas City zone, Central zone and Northeast zone. Spray crews visited 107 sites ranging in size from a few individual plants at some locations to about 3,500 acres. All control efforts were conducted on private land.

## **Timber harvest grant**

In FY10 the Natural Resource Conservation Service awarded MDC a \$386,000 National Conservation Innovation Grant to establish a trial cost-share program. This cost share is a partnership between landowners and loggers to help pay for the installation of Best Management Practices (BMPs) to prevent soil erosion on private land timber sales. The target area for grant includes Carter, Shan-

non, Ripley, Wayne, Reynolds and Iron counties. By the end of the fiscal year a contractor was hired to inspect the projects when completed to assure compliance with MDC BMPs.

## **Partnerships help support landowners**

Staff developed approximately 41 partnerships with federal, state and non-governmental organizations. These relationships helped MDC enhance technical and financial assistance and equipment support to landowners interested in improving fish, forest and wildlife resources. Through the partnerships, we assisted Missouri USDA with developing and applying \$170 million in Farm Bill conservation programs, including more than \$2 million in staff time. We also leveraged staffing, equipment and enhancement funds with conservation-habitat organizations.

## **Technical assistance to landowners**

MDC provided timely and responsive service through approximately 71,886 rural and urban landowner contacts, including more than 23,228 on-site landowner visits. Technical assistance was offered to landowners who wanted help with habitat-management plans toward achieving their land-use objectives. Staffers also answered 5,371 requests for wildlife nuisance and/or damage assistance, including 1,000 on-site visits. A survey completed in 2010 indicated that more than 90 percent of our cooperators were very satisfied with the assistance they received.

Conservation agents provide technical assistance as well. During FY10, agents made 18,922 resource-management contacts. They delivered 24,750 pounds of food-plot seed (obtained from free sources) to 425 Missouri landowners. Agents also assisted landowners with wildlife nuisance and damage problems.

## **Call Before You Cut**

Call Before You Cut, a voluntary forest-landowner information program, was launched in May 2009. Landowners are urged to call a toll-free telephone number, or visit a website, to receive information about the benefits of involving a professional forester in the management of their forest lands. Nearly 106 landowners who control more than 13,302 acres of forest were sent information in the first year of the program.

## **Habitat-management workshops**

MDC conducted or participated in more than 359 individual events involving private-landowner habitat-management workshops. More than 41,455 people attended the workshops that focused on management techniques to benefit early successional wildlife species such as bobwhite quail, rabbit and grassland-bird species. Wildlife damage biologists gave 73 public programs on trapping and damage prevention to 4,359 participants. In addition to providing programs on conservation-related topics, the biologists regularly interact with state-wide media.

## **Wetland restoration assistance**

Since 1992, MDC has assisted the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service in restoring critical wetland habitat back into the agricultural landscape. The primary impetus has been wetland teams composed of MDC and USDA employees who complete restoration aspects of the Wetland Reserve Program and other conservation programs. To date, Missouri has recorded 982 easements through the Wetland Reserve Program, which cover 141,358 acres. These restored wetlands not only provide critical habitat, but also store water during flood events. As a result, this alleviates pressure downstream on levees, communities and agricultural crops.

## **Bobwhite Quail Challenge Grant**

The Bobwhite Quail Challenge Grant Initiative was created in May 2007 by the Conservation Commission. The goal of the initiative is to challenge conservation organizations interested in establishing bobwhite quail habitat to form partnerships with private landowners throughout the state. In FY10, \$102,500 in Bobwhite Quail Challenge grants was provided to Quail Unlimited, Quail Forever, The Quail and Upland Wildlife Federation and the National Wild Turkey Federation. These organizations provided matching funds to produce \$205,000 to improve bobwhite quail on private land.

## **Agricultural conferences**

In an effort to connect with key agricultural leaders and agri-business in the state, MDC participated in each of the major agricultural conferences and trade shows throughout FY09. In addition to events such as the Farm Bureau Annual

Conference, Governors Conference on Agriculture, Missouri State Fair and the Missouri Cattle Industry Annual Convention, MDC also supported technical efforts in partnership with agricultural commodity organizations.

## **Private lake and stream management**

We responded to 6,010 requests for watershed, floodplain, riparian corridor and stream or lake management information and technical assistance on streams or lakes. We made 1,023 on-site visits and wrote 171 recommendation letters or management plans. On-site work included 112 fish-population surveys, 223 stocking inspections, 29 renovations and 37 fish-kill investigations. Staff conducted 14 stream or lake management workshops attended by 369 people. We also coordinated or participated in 33 active watershed-focused resource-management projects.

## **Farm Bill conservation programs**

Through the CP33, or Habitat Buffers for Upland Birds, more than 31,000 acres of native-grass field borders have been established along crop field edges. Under CP33, landowners receive cost share for establishing vegetative cover and an annual rental payment. Approximately 15,600 acres of Missouri's allocation remains, proving the popularity of this program. As a part of a national monitoring project, MDC staff are sampling quail and songbirds on 60 fields enrolled in CP33 and 60 fields not enrolled. Nationwide, the CP33 practice has shown a positive response by quail and several songbirds compared to crop fields without buffers. Many of the field borders are 3 years old and finally are providing favorable habitat for quail and songbirds.

In 2008, the USDA Farm Service Agency announced the State Acres for Wildlife Enhancement (SAFE) practice of the Conservation Reserve Program, which will bring an additional 21,600 acres of quail-friendly habitat to Missouri. This new practice provides cost share, incentives and annual rental payments for landowners interested in creating habitat for quail, prairie chickens and other declining wildlife. SAFE or CP38 already has resulted in almost 18,000 acres of quail- and grassland bird-friendly habitat. The practice is also targeting greater prairie chicken focus areas in southwest and northwest Missouri and sand prairie restoration efforts in southeast Missouri.

The USDA Natural Resource Conservation Service held statewide sign-ups for the Environmental Quality Incentive Program (EQIP) and Wildlife Incentive Program (WHIP). Since 2006, more than \$10 million in cost share has been provided to Missouri landowners to improve forest resources and habitats for wildlife. In fact, a record \$1.4 million in cost share was allocated to new WHIP contracts in 2008, and more than \$2 million in FY10 was awarded through EQIP for forestry-related practices. Through both programs, field staff provide technical assistance to private landowners and USDA staff responsible for implementing prairie, glade, savanna and woodland restoration projects, developing forest stewardship plans and enhancing quail habitat. Since 2002, more than 10,000 acres of prairie, glade, savanna and woodland have been restored through EQIP and WHIP on private land.

### **Grants target susceptible habitats**

In 2009, MDC received four Cooperative Conservation Partnership Initiative (CCPI) grants from the USDA Natural Resources Conservation Service. They will target quail and grassland-bird habitat improvements in Cass, Howell, Scott, Mississippi, New Madrid and Pemiscot counties, and stream-bank restoration in Shannon County on Mahans Creek. Although none of the proposals submitted during FY10 were approved, this still remains an excellent method to accelerate conservation work in watersheds of special significance and other geographic areas of environmental interest by addressing local resource problems.

### **Forest and Woodland Association**

The Forest and Woodland Association of Missouri (FWAM) was launched in FY10. Membership in FWAM is open to any Missourian with an interest in trees, forests and forest management. Designed to provide members an opportunity to network, receive training and respond to emerging forestry issues and challenges. MDC will look to partner with the Conservation Federation of Missouri in FY11 to assure the stability and success of the organization.



## **Serving Nature and You on Conservation Areas**

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### **Golden Anniversary Wetlands**

An interdisciplinary team of wetland experts continues to develop plans for rehabilitation of the five oldest wetland management areas (Fountain Grove, Duck Creek, Montrose, Schell-Osage and Ted Shanks).

Ted Shanks CA restoration is nearing completion with discussions for future development plans underway. Work at Fountain Grove CA continues through the second of two phases and initial effort at Montrose CA is in progress. The use of Light Detection and Ranging (LiDAR) at Duck Creek CA has proven to be a valuable tool. The ability to locate historical wetland features and model sheet flow has allowed a more efficient placement of water control structures to mimic natural water flow while reducing infrastructure. Schell Osage CA will be the last area renovated and work is expected to begin in FY2014.

### **Land acquisition**

Approximately 804 acres of land in six counties were acquired by purchase and donation. Acquisitions included an addition to the recently designated Spring Creek Ranch Natural Area that will provide watershed protection to the Savannah Branch stream and a restorable savanna community; land lying in close proximity to Hickory Canyons and Pickle Springs Natural Areas containing glade and woodland natural communities; and land providing habitat for prairie-chickens.

### **Forest and woodland improvements**

We conducted forest and woodland habitat improvements on 59,554 acres of state land. This included thinning young trees on 3,080 acres, post-sale cultural work on 1,116 acres, prescribed fires on 16,243 acres, 647 acres of tree planting, and harvest of 38,468 acres. Harvest from conservation areas were dominated by salvage from the May 8, 2009, wind event.

In addition, area plans were written on 28 Conservation Areas totaling 13,057 acres and 26,062 acres of forest land were inventoried in FY10.



## Land management

MDC has maintained a high level of active management in the past few years on MDC lands—especially for quail and grassland birds. During FY10, MDC staff conducted habitat management activities on more than 200,000 acres of public land with an additional 95 miles of edge habitat. Staff spent more than 423,000 hours department-wide on area and equipment maintenance.

### Forest Best Management Practices

Implemented and maintained soil and water conservation Best Management Practices (BMPs) for all forest-management practices on conservation areas. MDC monitors and documents BMP compliance on all MDC timber sales. In addition, approximately 10 percent of these sales are audited each year. In FY10 we reviewed 67 sites on 6,623 acres for proper BMP implementation and effectiveness.

### Prairie reconstruction

Re-establishing prairie is an important priority for the long-term conservation of prairie-dependent wildlife, particularly grassland birds and plants. Biologists often justify using high seeding rates in trying to re-establish prairies and to encourage native plants to out-compete undesirable invasive or exotic species. The drawback of using high seeding rates is that the native plants must then actively compete with each other for space, water and sunlight during the establishment, resulting in lower diversity of desired plants. The key to successfully establishing highly diverse prairie communities, while being cost and time efficient, is knowing appropriate seed-planting densities.

In June 2009 we examined three-year-old prairie plantings at three conservation areas that used three different seeding rates (5lbs/acre, 7lbs/acre, 10lbs/acre). A total of 216 plant species were identified within the plantings. As expected, numerous exotic species were identified within the plantings, including tall fescue, sericea lespedeza, clover and Japanese lespedeza. These plants were most likely the result of seed left over in the no-till cropfields, as well as from migration from surrounding lands.

We learned the 7 lbs/acre and 10lbs/acre broadcasted plantings had more plant species and were better established with native plants compared to the 5 lbs/acre. In addition, the 7 and 10 lbs/acre seeding rates had more non-grass, desirable plant species, whereas the 5 lbs/acre seeding rate plantings had more native warm-season grasses.



## Accounting for Department Operations

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### Listened to Missourians

The Department of Conservation believes that all Missouri citizens deserve respect, and that part of delivering excellent public service is to listen and understand what Missourians say about conservation programs and services.

We conduct a variety of scientifically sound, unbiased and representative efforts each year in an effort to understand public opinions, expectations and recreation participation. This information guides decisions about regulations and fish, forest and wildlife management.

In FY10 there were 26 activities that involved 66,752 people. These included public surveys, focus groups, public meetings and contacts with MDC's ombudsman. In addition, the staff of *Missouri Conservationist* magazine received a wide variety of questions and comments throughout the year.

### Disaster relief/response

MDC's promise to serve the public extends beyond our traditional goal to provide exceptional customer service. Equally important are our activities instrumental to the safety of our stakeholders and employees, and our responses to catastrophes within and outside our state borders. During FY10, we assisted in one Missouri flood disaster relief/response situation.

At the request of Missouri's State Emergency Management Agency (SEMA), MDC employees provided a variety of services to affected communities. They used heavy equipment, ATVs, and boats and vehicles to maintain levees, transport sandbags and assist with water rescue. Staff provided security details and traffic control when needed.

### Forestry technical-training academy

To provide a consistent standard of training to new Forestry Division employees, the forestry-training academy was continued through 2010. All new Forestry Division employees are required to attend this academy within the first two to three years of employment. This academy also is offered to all MDC employees to provide staff from other

divisions training in forest-management technical skills and management procedures. During FY10, four academy training courses were offered, with 122 students in attendance. All four of these training courses were held at the University of Missouri's University Forest Environmental Education Center.

### **Tracked strategic plan accomplishments**

Fiscal year 2010 was the fourth year of tracking accomplishments of *The Next Generation of Conservation*, MDC's strategic plan approved by the Conservation Commission in March 2006. The plan identifies nine goals, 28 results we want to achieve and 61 specific actions that MDC will work with Missourians to achieve. For each of the action items, performance measures and staff responsible for reporting are identified. An automated, web-based data-entry program facilitates accomplishment tracking.

The Next Generation of Conservation is available online at [www.mdc.mo.gov/about/next\\_gen](http://www.mdc.mo.gov/about/next_gen)

### **Internal audits**

MDC employs two full-time internal auditors who perform regular, independent audits to ensure that public funds are expended in a responsible manner. During the year ended June 30, 2010, MDC internal auditors reviewed various aspects of operations and issued five internal-audit reports. There were no major findings noted with the business practices reviewed.

### **Missouri Forest Resource Advisory Council provides forum**

The Missouri Forest Resource Advisory Council (MoFRAC) moved into its third year with Scott Brundage, a consulting forester, assuming the duties of chairman. The group, with representatives from throughout the state, provides an excellent forum for communication and coordination among Missouri's various forestry interest groups. MoFRAC also provides an excellent way for MDC to interact with a group of its stakeholders.

### **Internships encourage diversity**

MDC has a long-standing commitment to understanding the needs of Missouri citizens and accepts the challenge of staying in tune with our diverse stakeholders. One way to remain focused is through various diversity programs.

MDC began its sixth year of an internship program that creates experiences for students in the area of conservation, while addressing recruitment needs of MDC. Objectives are threefold: expose students to a variety of professional tasks and MDC's culture; mentor promising students in disciplines in which job candidates are scarce; and attract students with diverse cultural backgrounds to contribute to MDC's workforce and mission accomplishment. Internships are provided at both the undergraduate and graduate levels.

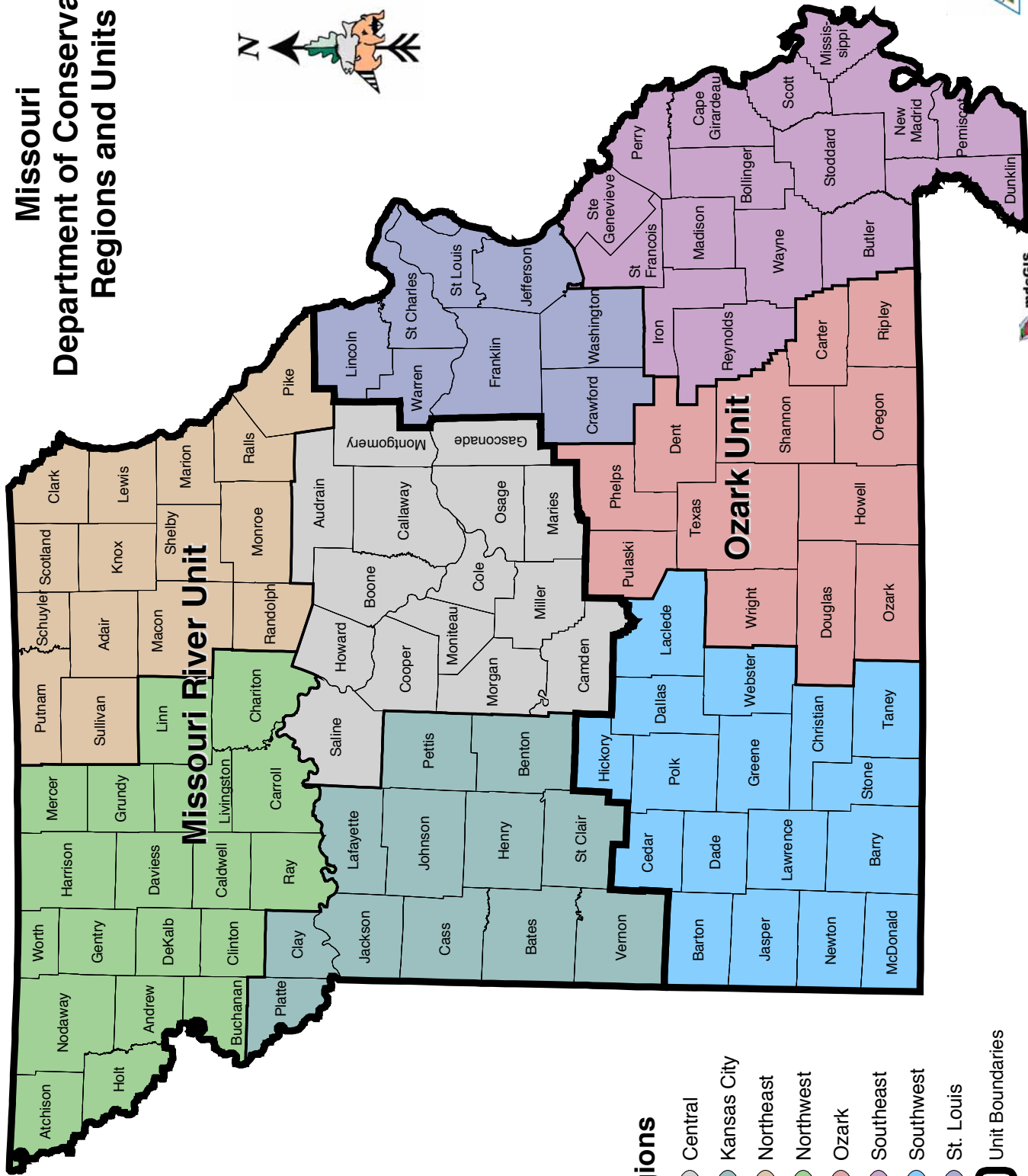
In FY10, 16 male and female students worked in a variety of internship positions, which were diverse in both location and job responsibilities. The students represented seven colleges and universities.

# Organization and Administrative Descriptions

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- ▲ Department Regions and Units
- ▲ Department Organizational Chart
- ▲ Director's Office and Department Divisions

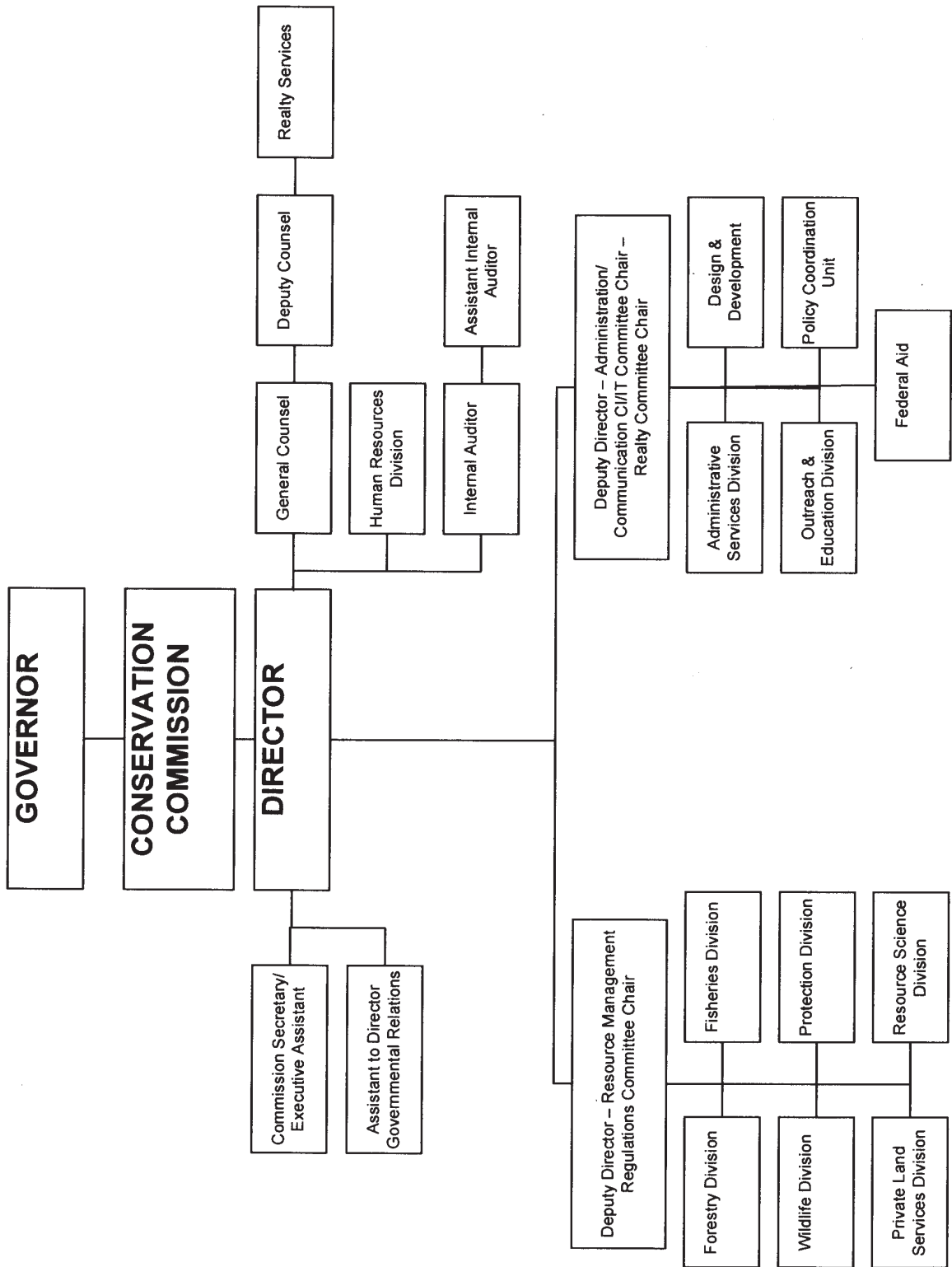
# Missouri Department of Conservation Regions and Units



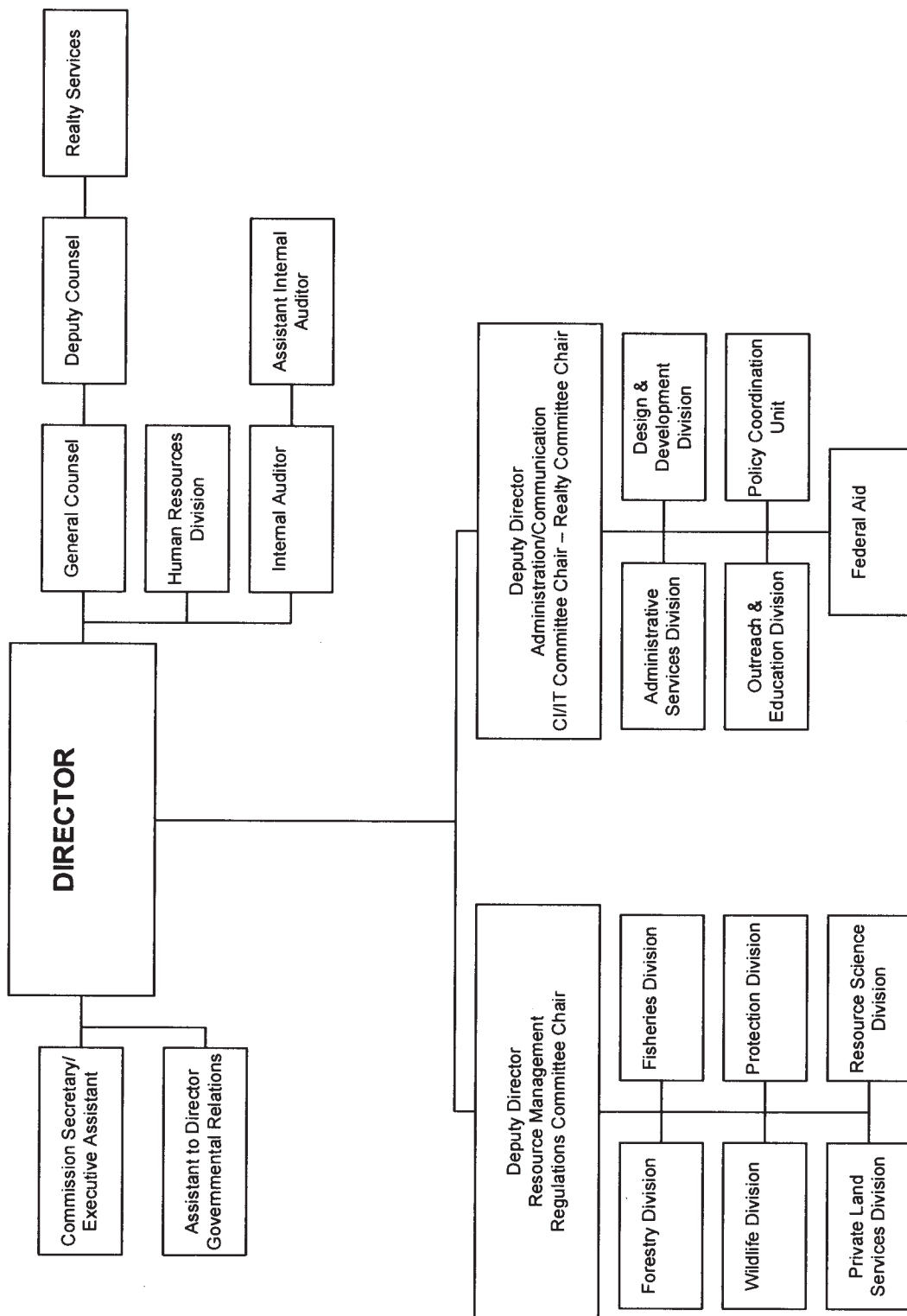
Cartography by: Kevin Borisenko, January 2003 | N:\MAPS\RegionUnitsNoShade.pdf



# MISSOURI DEPARTMENT OF CONSERVATION



# Director's Office



# Director's Office

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## **Bob Ziehmer, Director**

Director Bob Ziehmer, appointed by the Conservation Commission, is the administrative officer of the Department of Conservation and directly oversees the two deputy directors, assistant to director, general counsel, internal auditor and the Human Resources Division chief.

## **Tom Draper, Deputy Director**

Deputy Director Tom Draper administers field operations for MDC and directly oversees division administrators of Fisheries, Wildlife, Forestry, Private Land Services, Protection and Resource Science. He is also chair of the Regulations Committee, a standing committee that recommends statewide wildlife regulations to the Conservation Commission.

## **Tim Ripperger, Deputy Director**

Deputy Director Tim Ripperger directly oversees Outreach and Education Division, Administrative Services Division, Design and Development Division, Policy Coordination Unit and the Federal Aid program. He also chairs the Capital Improvements and Information Technology Committee and the Realty Committee.

## **Aaron Jeffries, Assistant to Director**

Assistant to Director Aaron Jeffries is the MDC liaison with the state legislature, and other elected officials, state agencies in the executive branch and the governor's office staff. He also represents MDC on the Land Reclamation Commission.

## **Tracy McGinnis, General Counsel**

General Counsel Tracy McGinnis is legal adviser to MDC staff, the director and Conservation Commission. She oversees the Deputy Counsel, who manages Realty Services and the Grants and Donations program.

## **Nancy Dubbert, Internal Auditor**

Internal Auditor Nancy Dubbert serves MDC by independently analyzing MDC operations, policies, procedures, records and compliance with laws and regulations to ensure effectiveness and accountability. The internal auditor also is custodian of records and oversees the assistant internal auditor.

## **Policy Coordination Unit**

The Policy Coordination Unit serves the director's office and the agency by managing agency-wide, statewide, complex or sensitive issues. Examples of services include:

- Coordinating intra- and inter-state fish, forest and wildlife resources associated with the Missouri, Mississippi and White rivers.
- Coordinating additions or revisions to the Area and Resources Management Policy and Procedures Manual.
- Obtaining necessary state and federal environmental regulatory permits and cultural-resources clearances for statewide MDC construction and land-management activities.
- Representing public fish, forest and wildlife interests by coordinating and providing comments or recommendations to federal agencies authorized to conduct environmental reviews and approve project permits.
- Responding to public requests for site-specific information regarding species and communities of conservation concern by providing comments or recommendations to minimize impacts.

- Coordinating public involvement activities including social and economic survey analysis, public-use surveys and regional citizen forums.
- Guiding MDC's strategic-planning process.

## **Realty Services**

Realty Services is responsible for handling the acquisition of all land and land rights for MDC; resolving boundary, encroachment, trespass or access issues on MDC areas; handling easement requests; maintaining records of MDC's real estate inventory; and distributing annual in-lieu tax payments to Missouri's 114 counties.

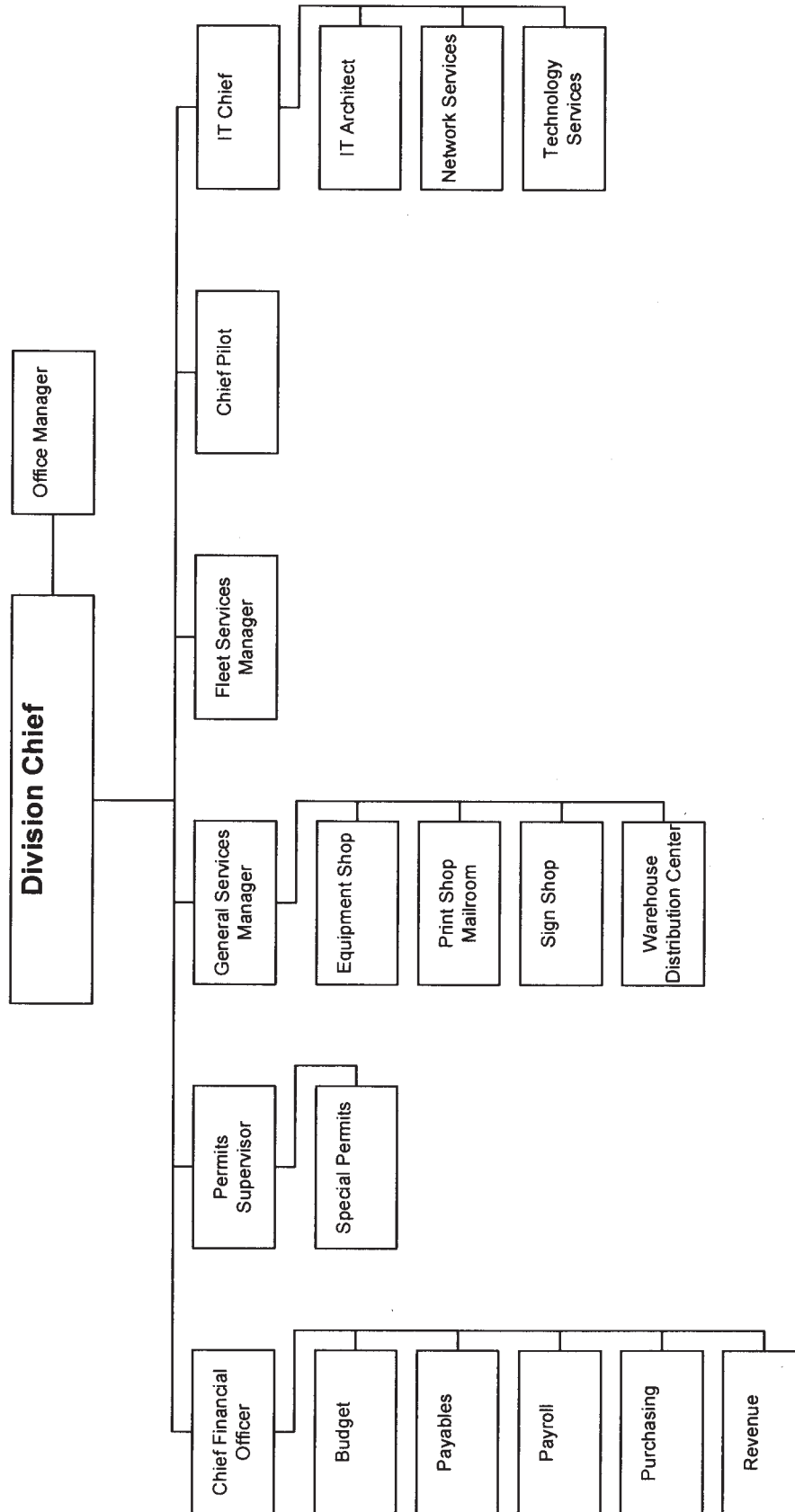
## **Federal Aid**

The federal aid staff is MDC's primary administrator of federal-aid granting opportunities. Some of the agencies from which federal-aid monies are obtained include the U.S. Fish and Wildlife Service, U.S. Forest Service, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency and Natural Resource Conservation Service. MDC's federal-aid staff administers approximately 85 federal grants, with the most significant of these being the Sport Fish and Wildlife Restoration grants.





# Administrative Services Division



# Administrative Services Division

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**Mission:** *Serving MDC staff to provide agency-wide support and expertise in a manner that ensures financial accountability; promotes wise use of assets; provides ancillary services; and offers technological solutions for satisfying Department responsibilities and needs that meet public expectations.*

Administrative Services Division fulfills its mission by serving MDC's internal and external stakeholders through the following sections that comprise this division.

## Programs

**Financial Services**—This section provides a broad range of financial functions that support MDC's operations, while carefully managing the agency's assets, which have been entrusted to its care. Revenue projections and management, internal and executive budget management, financial analytical support, agricultural crop management, accounts payable and MDC's payroll are the functions this unit oversees.

**Permit Services**—This section is responsible for the distribution and management of point-of-sale automated permits, managed hunt/special permits, and commercial and landowner permits.

**Fleet Services**—The unit is responsible for ordering Department vehicles and fixed-asset inventory. We seek ways to improve and minimize the traveling performed with state vehicles.

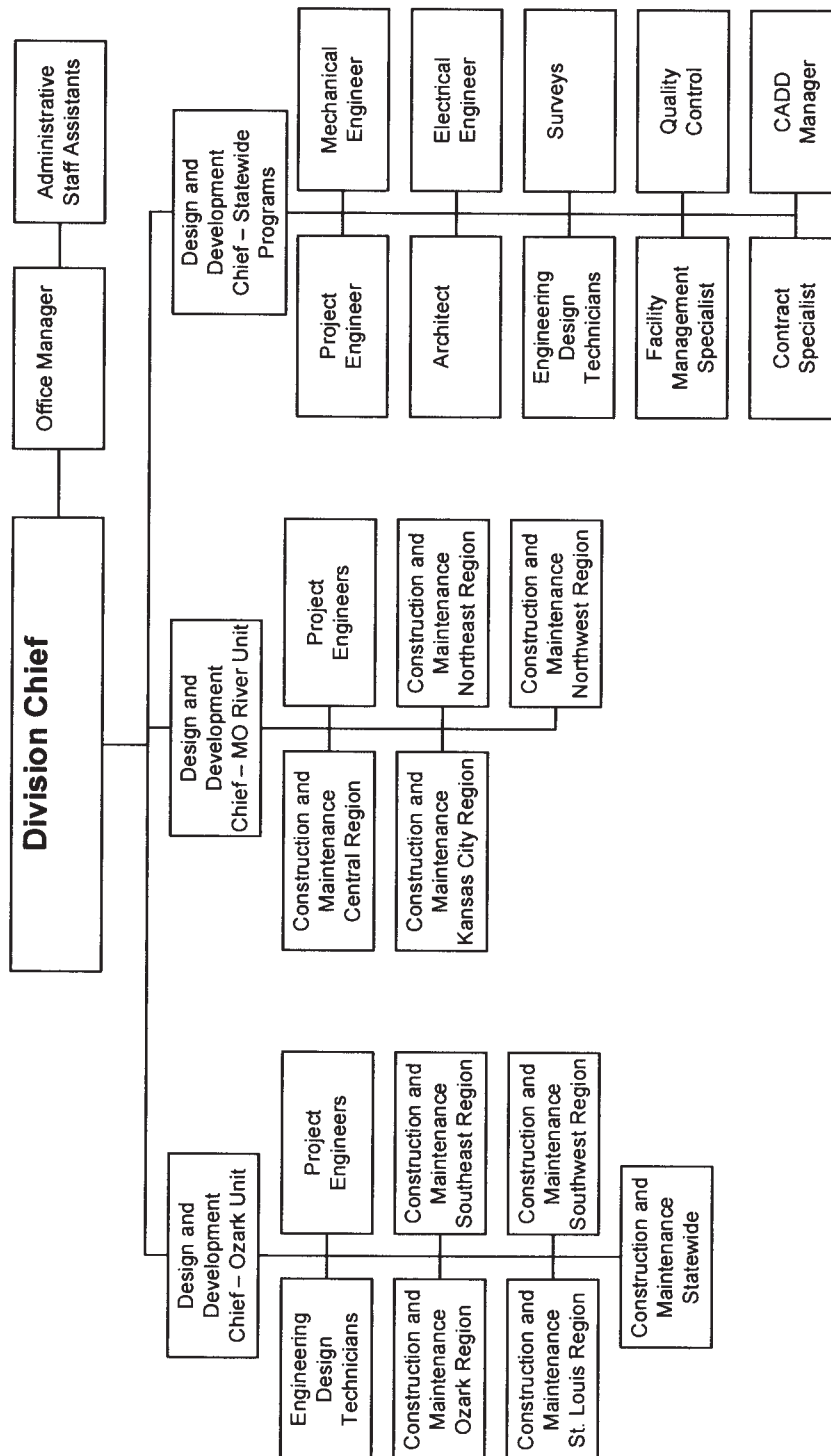
**Information Technology Services**—Communication responsibility for the entire agency is entrusted to this section. Better known as IT, employees provide a wide range of services which include data, telecommunications and radio system management, helpdesk operations, software support, network operations and application-development functions.

**General Services**—This section oversees equipment management and maintenance, sign production, distribution center operations, and printing and mailing functions.

**Flight Services**—This unit provides flight services for MDC resource functions such as wildlife management, fire control and enforcement. Flight Services is responsible for the upkeep and maintenance of MDC-owned aviation equipment.

Administrative Services Division makes every effort to achieve its mission by maintaining the financial integrity of MDC and ensuring prudent and frugal use of its assets. We provide a broad range of high-quality support services to MDC's staff and programs. Not only do we lead and facilitate the effective use of technology in MDC operations, but we also acquire and maintain MDC equipment.

# Design and Development Division





# Design and Development Division

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**Mission:** *To provide high-quality professional engineering, architectural, surveying and construction/maintenance services to assist MDC in carrying out its mission.*

## Goals

- Support MDC by designing and constructing public-use facilities that are in harmony with the environment and enhance public use of our natural resources
- Provide sound conservation engineering assistance to other MDC divisions and outside partners (communities, counties, landowners)
- Provide high-quality maintenance to MDC facilities and conservation areas
- Provide excellent and timely customer service

## Organization

The division is organized into three units, with administrative and design staff located in the central office, and construction and maintenance staff located in each of the eight regions.

## Programs

**Engineering and Architecture**—The division provides engineering and architectural designs to implement capital improvement/construction development (CI/CD) budget. Staff handles all aspects of design and development on projects which may include: performing investigations, conducting feasibility studies and/or environmental assessments, and preparing design drawings with associated contract specifications. Types of projects include boat accesses, docks, roads, parking areas, office and storage buildings, fish hatcheries, fishing lakes and ponds, nature centers, shooting ranges, trails and wetlands.

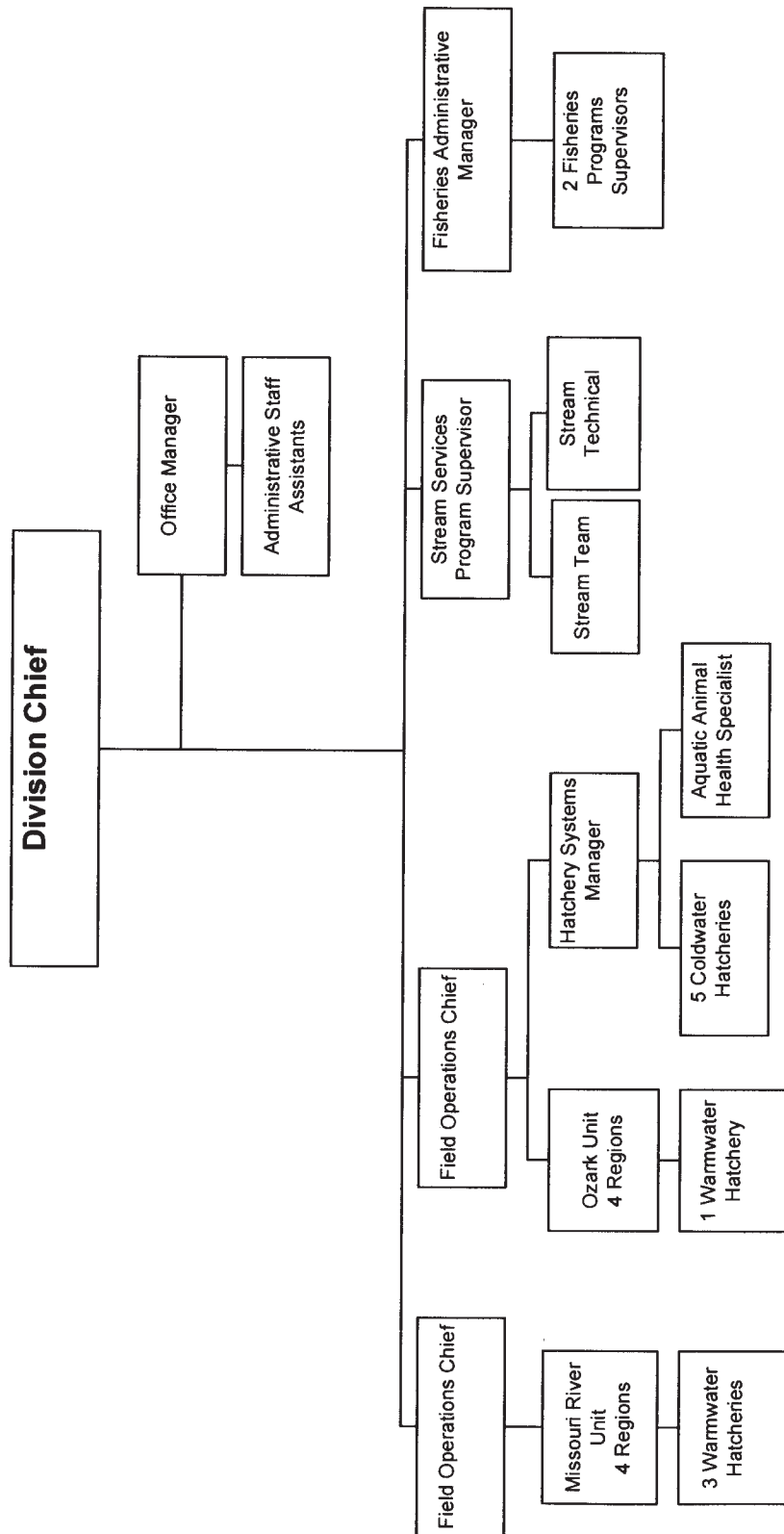
**Technical Support**—In addition to handling the CI/CD projects, engineering staff also provides support and design expertise on non-capital improvement projects to MDC divisions. Staff also provides design drawings and estimated quantities on MDC's repair and renovation projects; these efforts support our regional construction and maintenance superintendents and field resource staff.

**Surveys**—Employees in this unit are responsible for engineering and construction surveys and land boundary surveying for property boundary delineation.

**Construction and Maintenance**—In each region, the division maintains superintendents, carpenters, equipment operators and facility maintenance technicians. This staff is responsible for the construction of capital-improvement projects assigned to it, as well as small construction projects, and repair and renovation projects needed by other MDC divisions. They provide facility maintenance to nature centers and regional offices, and perform routine maintenance at unstaffed department areas. Other maintenance tasks include mowing grass, grading parking areas and entry roads, cleaning boat ramps and performing minor maintenance on privies, docks and pavilions.

**County Aid Road Trust (CART)**—The division administers the Department's CART Program which involves cost sharing of roadway maintenance with counties and other governmental subdivisions to help ensure that roads accessing Department areas are properly maintained and provide adequate access.

# Fisheries Division



# Fisheries Division

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**Mission:** *To professionally manage the fish and associated aquatic plants and animals of Missouri for the use and enjoyment of the people.*

## Goals

- To maintain aquatic biodiversity
- Reduce the effects of aquatic nuisance species
- Provide enjoyable fishing trips
- Protect aquatic habitat
- Inform and educate the public about Missouri's aquatic resources

Missouri's aquatic resources are vast and diverse. Missouri has almost 17,000 miles of permanent rivers and streams and another 39,000 miles of intermittent streams. The state also has about 780,000 acres of lakes (36 percent public). Each year, millions of people use and enjoy our waters, and fishing continues to be one of our most popular outdoor activities. About 22 percent of our residents aged 16 and older fish sometime during the year. During 2009, MDC sold 1,473,002 fishing permits and tags of all types. Fishing is big business and very important to the state's tourism industry.

**Organization:** To carry out its mission and achieve its goals, the division has fisheries management staff deployed in MDC's eight regions. Management efforts are supported by four warmwater fish hatcheries, one fish-rearing station, five coldwater fish hatcheries, an aquatic animal health specialist, the Stream Unit and central office staff.

## Programs

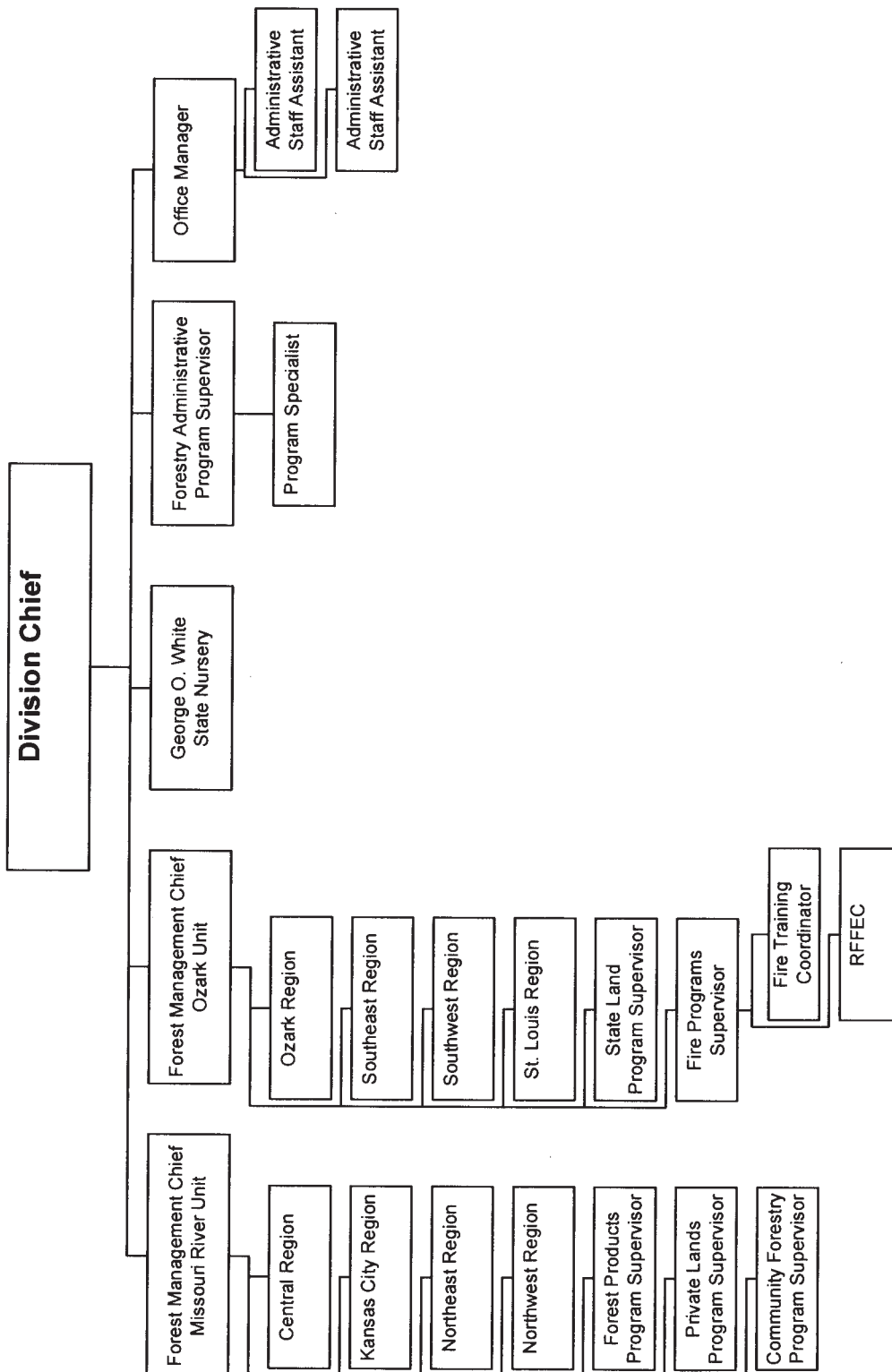
Regional staff is responsible for monitoring and maintaining the quality of the aquatic resources, managing the public fisheries resources, providing technical guidance in lake and stream management to private landowners and other state and federal agencies, providing and assisting with public information and education, and representing the division and MDC on matters pertaining to the aquatic resources of their region.

The staffs of the four warmwater hatcheries and the fish-rearing station are responsible for rearing the fish needed to stock public waters, waters used for special fishing events and aquatic resource education, and private lakes that qualify for initial stocking of fingerling fish. They also play a vital role in our efforts to restore state and federally endangered species. The five coldwater hatcheries rear the trout needed to stock public waters. Their employees are also responsible for stocking and managing the four trout parks that are enjoyed by more than 410,000 anglers each year.

The Stream Unit is responsible for stream public-involvement programs. It also oversees a Stream Technical Unit, which provides technical stream services to MDC staff, other state and federal agencies and private landowners. Public-involvement programs include the Missouri Stream Team and Volunteer Water Quality Monitoring programs, which consist of 85,000 citizen volunteers. Both are cosponsored by the Missouri Department of Natural Resources and the Missouri Conservation Federation.

Central office staff directs and administers division programs, works on the acquisition and development of public fishing and boat access areas, coordinates angler recognition programs, coordinates the production of technical and popular written materials and provides administrative support for division and MDC staff and programs.

# Forestry Division





# Forestry Division

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**Mission:** *To protect and manage the forests of the state for long-term resource health and sustainability, and for the use and enjoyment of Missouri's citizens.*

## Goals

- Conduct public-land management activities that are scientifically based and aimed at developing and maintaining healthy forest and woodland ecosystems
- Engage private-forest landowners, communities and homeowners in sound, scientifically based tree and forest management through education, technical service and the development of partnerships with other agencies, organizations and forest products industry

**Organization:** To fulfill its mission, the division is organized into seven main program areas as described below. Administrative staff members are assigned to specific program areas, while field staff work across all program areas.

## Programs

**Private Land**—Foresters assist Missouri landowners with forest management through one-on-one contacts. Foresters often use the Tree Farm program, Forest Stewardship program, state and federal cost-share programs, and offer technical advice to assist landowners. We help more than 1,800 landowners with management on 4,000-plus acres annually.

**Public Land**—The division manages more than 440,000 acres of public forest land. Foresters also provide technical assistance on lands managed by the Wildlife Division. We annually complete more than 72,370 acres of active management. This includes forest inventory, tree planting, timber sales, forest-stand improvement, wildlife-management practices, and glade and savanna management.

**Fire**—We have statutory responsibility for the state's wildfire suppression. Last year, 1,594 fires burned 15,180 acres in Missouri. Division personnel work closely with more than 800 fire departments to offer training, provide federal excess property, provide grants for the purchase of fire equipment and promote wildfire-prevention activities.

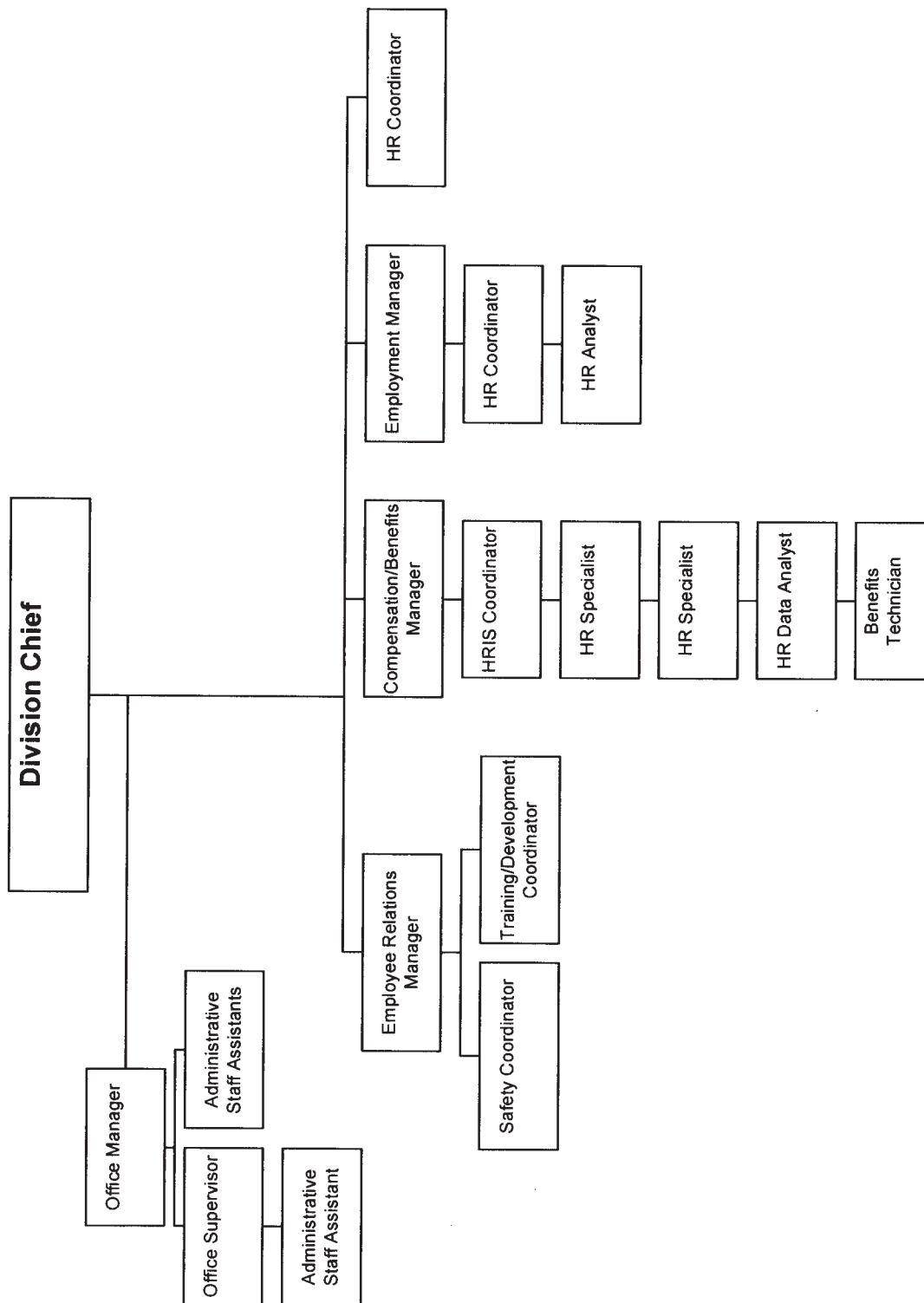
**Urban and Community Forestry**—This program provides planning and technical assistance to communities and homeowners. In addition, the Tree Resource Improvement and Maintenance (TRIM) program provided cost-share assistance to more than 40 Missouri communities for tree planting and maintenance of their community forest resources. We have a partnership with the National Arbor Day Foundation to promote and administer the Tree City USA program. Missouri has 79 certified Tree City USA communities. We also work with the Arbor Day Foundation to provide training to electric utility right of way clearing crews through the Tree Line USA program. Eleven utility providers are Tree Line USA certified.

**Forest Products**—This program provides technical assistance to the wood products industry and state-wide promotion of Best Management Practices (BMPs) for water quality on timber sales. We work with the Missouri Forest Products Association to provide programs such as the Professional Timber Harvesters and Master Logger Certification programs. We work with entities interested in the emerging bio-energy field and provide technical training for field foresters regarding wood use, timber harvesting techniques, contracting and implementing BMPs. A \$6 million American Recovery & Reinvestment Act grant was received to fund the construction of wood-burning boiler systems in six select Missouri schools.

**Outreach and Education**—Forestry Division works closely with our Outreach and Education Division to increase Missourians' understanding about their state's forest resources and proper forest-management activities. In addition, foresters conduct programs, field days and workshops for schools, special-interest groups and the general public on a wide range of forest-management issues.

**State Forest Nursery**—The nursery annually grows and distributes approximately 3.5 million seedlings of more than 60 species. The seedlings include trees and shrubs suitable for reforestation and wildlife-habitat restoration activities. The seedlings are planted on both public and private land throughout the state.

# Human Resources Division



# Human Resources Division

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**Mission:** *Sustains human resources services and programs necessary to recruit and retain a diversified, dynamic workforce and ensures we are considered an “employer of choice.”*

## Goals

- Assist MDC in hiring and retaining a highly trained and diverse workforce
- Advance practices that encourage employee empowerment and recognize job accomplishments
- Ensure ongoing employee training and development programs are predicated on important job competencies and offered in the most efficient and cost-effective manner
- Reinforce safety-conscious attitudes and practices in all aspects of employee work

## Programs

**Compensation**—Staff performs compensation and classification activities that are used to support an employee-compensation program, which is both competitive and fiscally responsible. Staff also administers significant employee-benefits programs such as a comprehensive medical and life-insurance program.

**Employee Relations**—Staff coordinates activities promoting employee relations such as programs that recognize years of service, special achievement and retirement, and administers employee health and wellness programs that include health screenings and health education. Staff also assists employees and supervisors during grievance and corrective action processes to ensure that objective, fair and appropriate actions occur.

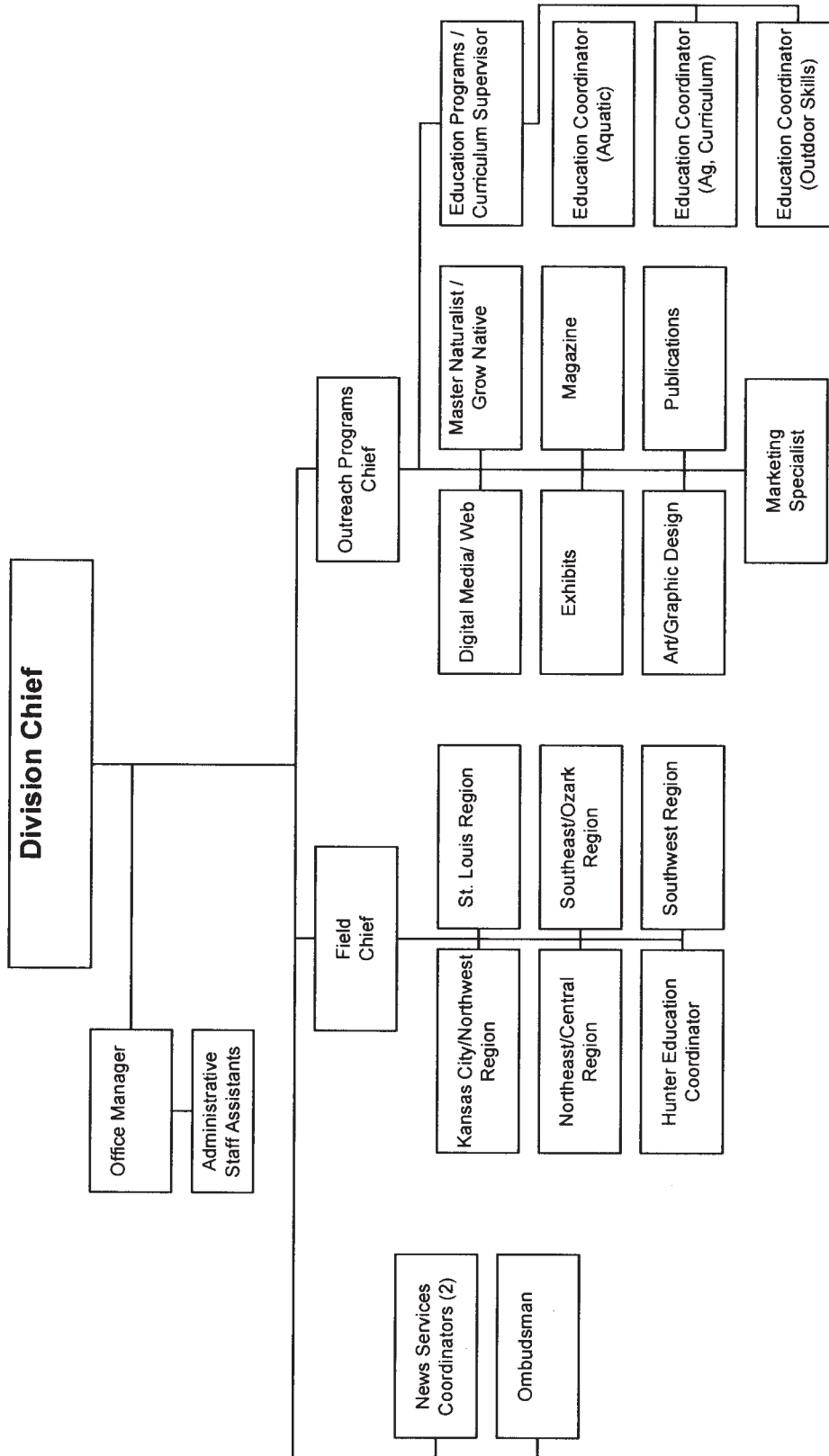
**Policy Administration**—Staff maintains MDC’s Human Resources Policies by developing new or revised employment-related policies that help supervisors guide employees uniformly and fairly. Staff also tracks state and federal laws, executive orders and regulations that address human resources management issues, and works to ensure MDC is in compliance.

**Recruitment and Selection**—Staff uses a variety of recruitment methods to attract qualified applicants for job vacancies and assists supervisors with all activities during the evaluation and recommendation processes. In addition, staff monitors MDC’s affirmative-action effort to ensure equal-employment opportunities.

**Training and Development**—Staff administers MDC’s employee development and leadership-training programs. Among them is the Academy for Leadership Excellence, which provides training for all employees. The training is based on specifically identified competencies (knowledge, skills, behaviors and attitudes) that MDC considers important to success.

**Safety**—Staff administers loss-control programs including safety training, hazard identification on public lands, chemical safety, and personal injury, vehicle accident and public-mishap reporting and monitoring.

# Outreach and Education Division





# Outreach and Education Division

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**Mission:** *To help Missourians connect with nature and conserve it, too.*

## Goals

- Teach Missourians how to sustain healthy plant and animal communities
- Provide Missourians of all ages with skills and knowledge to enjoy the outdoors
- Show the many benefits people get from conserving our fish, forests and wildlife
- Teach the importance of science and ethical behavior in balancing how we live with our fish, forests and wildlife
- Help Missourians understand these key concepts of conservation:
  - a. A healthy environment needs a diverse mix of plants and animals.
  - b. Forests, grasslands, rivers and wetlands are always changing—with or without us. To live in balance with the natural world, we must understand how it works and work with it.
  - c. It's natural for what's on the ground to flow downhill into streams and ponds. To protect the health of our waters and the life that depends on them, we must be mindful of what we put on the land and how we change it.
  - d. Hunting, fishing, trapping and harvesting wood are part of our heritage, provide us with valuable resources and, perhaps most important, are tools that can be used to improve and maintain the health of our fish, forests and wildlife long into the future.

## Programs

**Outreach**—The *Missouri Conservationist* magazine is mailed to about 500,000 readers each month and covers all sorts of nature, conservation and outdoor-recreation subjects. *Xplor*, the new kids' magazine, reaches more than 40,000 readers. We serve up millions of web pages each year, produce free publications, for-sale books and news releases on topics as diverse as bird identification, hunting and fishing regulations, and how to create wildlife habitat. The information flows in as well as out; an ombudsman finds the answers to citizens' questions and helps to investigate concerns and resolve complaints.

**Conservation Education through Schools**—The new Discover Nature Schools program helps students explore nature close to home. It includes instructional materials correlated with state standards, teacher workshops, grants for outdoor learning experiences and small outdoor classroom development. Missouri Archery in the Schools Program is offered to grades 4–12. It's part of a fast-growing national program that's empowering students with a lifelong skill.

**Conservation Nature Centers, Education Centers and Visitor Centers**—These are located in Jefferson City, Kirkwood, Blue Springs, Springfield, Cape Girardeau, St. Charles, Winona, St. Louis, Branson and Glencoe. Exhibits and naturalist-led programs, as well as walking trails, offer about a million visitors each year a variety of opportunities to learn about and enjoy Missouri's nature. Programs such as Discover Nature Families and Discover Nature Women teach skills to enjoy the outdoors.

**Hunter Education**—Since 1988, hunter-education training has been mandatory for all hunters born on or after Jan. 1, 1967. Our staff works with the conservation agents to coordinate volunteer hunter-educators, who provide about 950 classes each year. These result in hunter certification of about 25,000 people annually. Online training, with its required hands-on field day experience, expands the training opportunities.

**Shooting Range/Outdoor Education Centers**—Five staffed shooting ranges provide safe, inviting places for hunters and others to practice shooting rifles, shotguns, handguns and archery equipment. Classes are offered to the public as part of our Discover Hunting program, designed to give beginning

hunters the skills they need. More than 130,000 people each year use the staffed ranges. In addition, more than 75 unstaffed ranges (including both firearms and archery ranges) serve Missourians throughout the state.

**Citizen-Involvement/Awareness Programs (Grow Native, Missouri Master Naturalist, No MOrE Trash)**—Several programs help Missourians promote conservation at a statewide and grassroots level. Three partners work with MDC to sponsor these: Missouri Department of Agriculture, University of Missouri Extension and Missouri Department of Transportation, respectively.



David  
Besenger

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graph TD
    DC[Division Chief] --- APC[Agriculture Program Coordinator]
    DC --- OM[Office Manager]
    DC --- ASA[Administrative Staff Assistant]
    DC --- MRUC[Missouri River Unit Chief]
    DC --- OZUC[Ozark Unit Chief]
    MRUC --- NR[Northeast Region Supervisor]
    MRUC --- CR[Central Region Supervisor]
    MRUC --- KR[Kansas City Region Supervisor]
    NR --- NPL[7 Private Land Conservationists]
    CR --- CPL[7 Private Land Conservationists]
    KR --- KCP[1 Community Conservation Planner]
    KR --- KPL[6 Private Land Conservationists]
    OZUC --- PLS[Private Land Programs Supervisor]
    OZUC --- PLF[Private Land Field Programs Supervisor]
    PLS --- APS[4 Area Biologists]
    PLS --- PLSB[Private Land Services Biologist]
    PLF --- WDB[5 Wildlife Damage Biologists]
    OZUC --- WSB[4 Wetland Services Biologists]
    OZUC --- SLR[St. Louis Region Supervisor]
    OZUC --- SWR[Southwest Region Supervisor]
    OZUC --- OR[Ozark Region Supervisor]
    OZUC --- SR[Southeast Region Supervisor]
    SLR --- SLRCP[1 Community Conservation Planner]
    SLR --- SLRPL[4 Private Land Conservationists]
    SWR --- SWRCP[1 Community Conservation Planner]
    SWR --- SWRPL[7 Private Land Conservationists]
    OR --- ORPL[6 Private Land Conservationists]
    SR --- SRPL[6 Private Land Conservationists]
  
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The organizational chart for the Division Chief is structured as follows:

- Division Chief**
  - Agriculture Program Coordinator**
  - Office Manager**
  - Administrative Staff Assistant**
  - Missouri River Unit Chief**
    - Northeast Region Supervisor**
      - 7 Private Land Conservationists
    - Central Region Supervisor**
      - 7 Private Land Conservationists
    - Kansas City Region Supervisor**
      - 1 Community Conservation Planner
      - 6 Private Land Conservationists
  - Ozark Unit Chief**
    - Private Land Programs Supervisor**
      - 4 Area Biologists
      - Private Land Services Biologist
    - Private Land Field Programs Supervisor**
      - 5 Wildlife Damage Biologists
    - 4 Wetland Services Biologists
    - St. Louis Region Supervisor**
      - 1 Community Conservation Planner
      - 4 Private Land Conservationists
    - Southwest Region Supervisor**
      - 1 Community Conservation Planner
      - 7 Private Land Conservationists
    - Ozark Region Supervisor**
      - 6 Private Land Conservationists
    - Southeast Region Supervisor**
      - 6 Private Land Conservationists



# Private Land Services Division

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**Mission:** *Help landowners meet their land management objectives in ways that enhance fish, forest and wildlife conservation.*

**Organization:** With 93 percent of Missouri in private ownership, the health of our natural resources will be determined by private landowners. In recognition of the need to provide enhanced support to traditional agricultural producers, as well as growing numbers of people who own land for recreation, Private Land Services Division was established in 1999. The division contains fish, forest, wildlife and agriculture professionals who provide conservation assistance to private landowners in Missouri.

## Goals

- To provide timely technical advice to private landowners who request assistance
- To help interested private landowners provide meaningful benefits to fish, forest and wildlife resources that need attention
- To increase awareness of conservation importance by connecting with agriculture and communities

## Programs

**Technical Support**—Private Land Conservationists are available to evaluate resource needs and provide advice/recommendations to private landowners through in-office or on-ground visits, as well as workshops, field days and other initiatives. Most of these positions are co-located in USDA service centers to make contact easy for private landowners throughout the state.

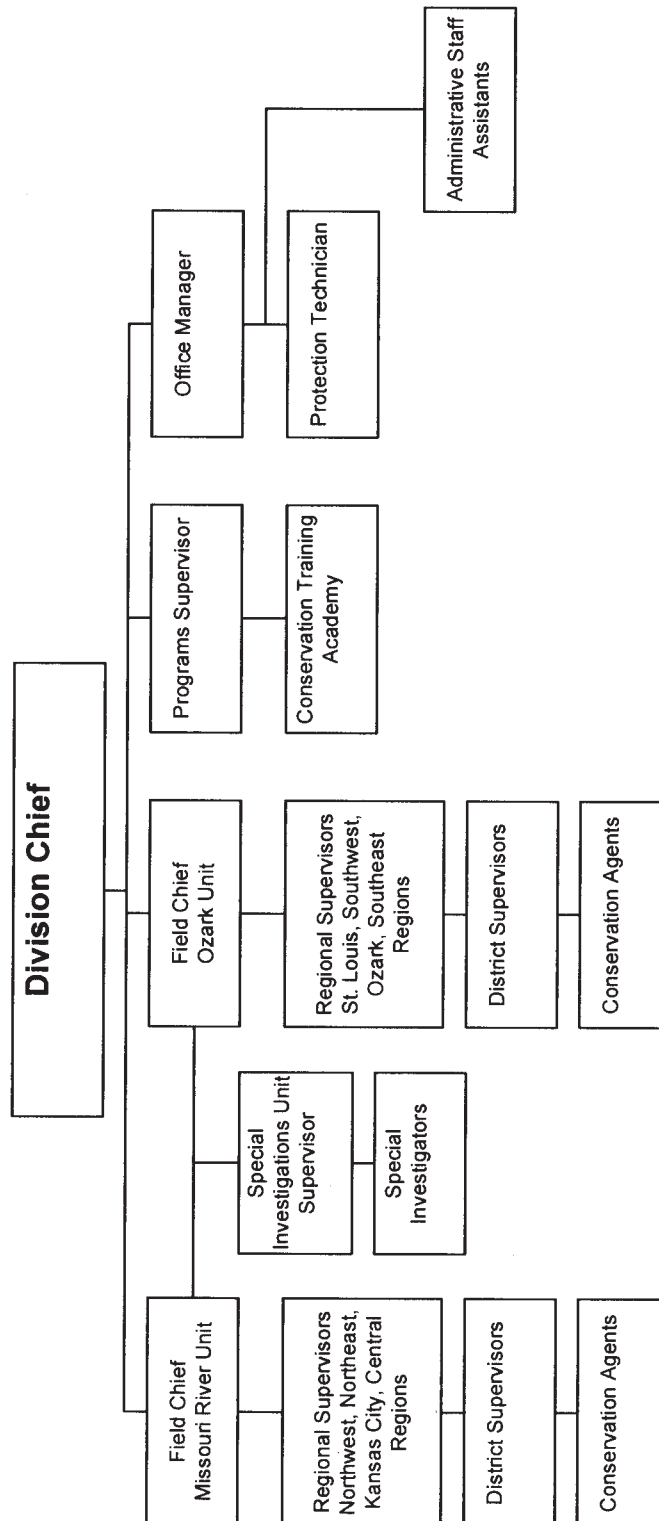
**Financial Assistance**—MDC has established effective working partnerships with the Natural Resources Conservation Service and Farm Service Agency to integrate fish, forest and wildlife considerations into implementation of Farm Bill programs that include Conservation Reserve Program, Wetland Reserve Program, Environmental Quality Incentives Program, Grassland Reserve Program, Conservation Stewardship Program and Wildlife Habitat Incentives Program. MDC is also in partnership with non-governmental organizations such as Ducks Unlimited, Quail Unlimited, the National Wild Turkey Federation, Quail Forever, Pheasants Forever and the Ruffed Grouse Society to develop cost-share and other initiatives through matching arrangements.

**Wildlife Damage Assistance**—Wildlife damage-control biologists provide expert and specialized technical assistance to private landowners who experience problems with wildlife including beaver, coyote, otter, Canada geese, deer and other species.

**Agriculture Liaison**—Liaison efforts with agricultural agencies and groups foster communication and understanding of fish, forest and wildlife issues as they relate to agriculture. These efforts are important since 65 percent of the land area of Missouri is included in farms.

**Community Conservation**—Community Conservation Planners in Kansas City, St. Louis and Springfield/Branson/Joplin areas are available to deliver natural-resource technical services at the municipal, county and regional levels. Their job focus is to work with communities, urban planners and developers to help them make informed land-use decisions that incorporate the conservation of Missouri's forest, fish and wildlife resources.

# Protection Division



# Protection Division

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**Mission:** *To protect and conserve Missouri fish, forest and wildlife resources and to serve citizens through a coordinated program of resource law enforcement, education, information and one-on-one contacts.*

## Goals

- To provide high-quality resource law-enforcement services to the public for protection and conservation of Missouri's fish, forest and wildlife, as well as for safe and proper public uses of conservation areas
- To provide opportunities for all citizens to use, enjoy and learn about fish, forests and wildlife through educational and informational programs and habitat management advice
- To represent the Conservation Commission, Department of Conservation and the state with knowledgeable, respectful, well-trained and professional employees versed in all general MDC programs in every county

## Programs

**Conservation Agents**—Agents carry out a variety of programs for MDC within their county assignments. Major job components are resource law-enforcement activities; hunter education; local media liaison duties (many with regular radio/TV programs and newspaper articles); educational and informational presentations to adult and youth groups; wildlife surveys; response to fish kills, wildlife-nuisance and damage complaints; and basic fish-, forest- and wildlife-management advice and services to private landowners.

Conservation agents contacted 200,999 hunters and anglers in FY10 to ensure compliance and to provide regulation information. During these contacts, agents noted 27,691 resource violations; issued 3,678 written warnings; and made 8,048 arrests. From those 8,048 arrests, 93.5 percent resulted in a guilty plea or verdict. This high conviction rate indicates excellent public support and high-quality work by agents.

**Operation Game Thief**—Operation Game Thief provides a way for citizens to anonymously report poaching incidents with the opportunity for a monetary reward. In the calendar year 2009, OGT produced 354 convictions from 1,183 telephone calls, which resulted in \$10,450 in reward money being paid to informants. The Operation Game Thief traveling exhibit was used at nine events throughout Missouri this past year.

**Revocations**—Missouri is a participating state in the Interstate Wildlife Violator Compact (IWVC). The compact is a legal organization of the wildlife agencies of 35 member states that agree to reciprocally honor revocations/suspensions of hunting, fishing and trapping privileges for wildlife-related violations. During the last fiscal year, 1,750 people from other states had their privileges revoked in Missouri through provisions of the Interstate Wildlife Violator Compact; an additional 133 were revoked for cause by the Conservation Commission in Missouri and submitted to the IWVC. Participation in the compact also benefits Missourians who travel to other compact member states for hunting and fishing activities. If found in violation, they may be given the opportunity to resolve the citation by mail rather than being required to post a bond before leaving the member state. They are subject to revocation by all compact states if the citation is ignored.

**Habitat Program**—Conservation agents provide habitat-planning information and food-plot seed (obtained from free sources) to Missouri landowners. The goals of the program are to improve the quality of wildlife habitat on private lands and promote better farmer and landowner relations. Conservation agents distributed 24,750 pounds of seed to 425 landowners in FY10. The program is an avenue through which to contact private landowners regarding wildlife-management programs, as well as other programs which MDC offers.

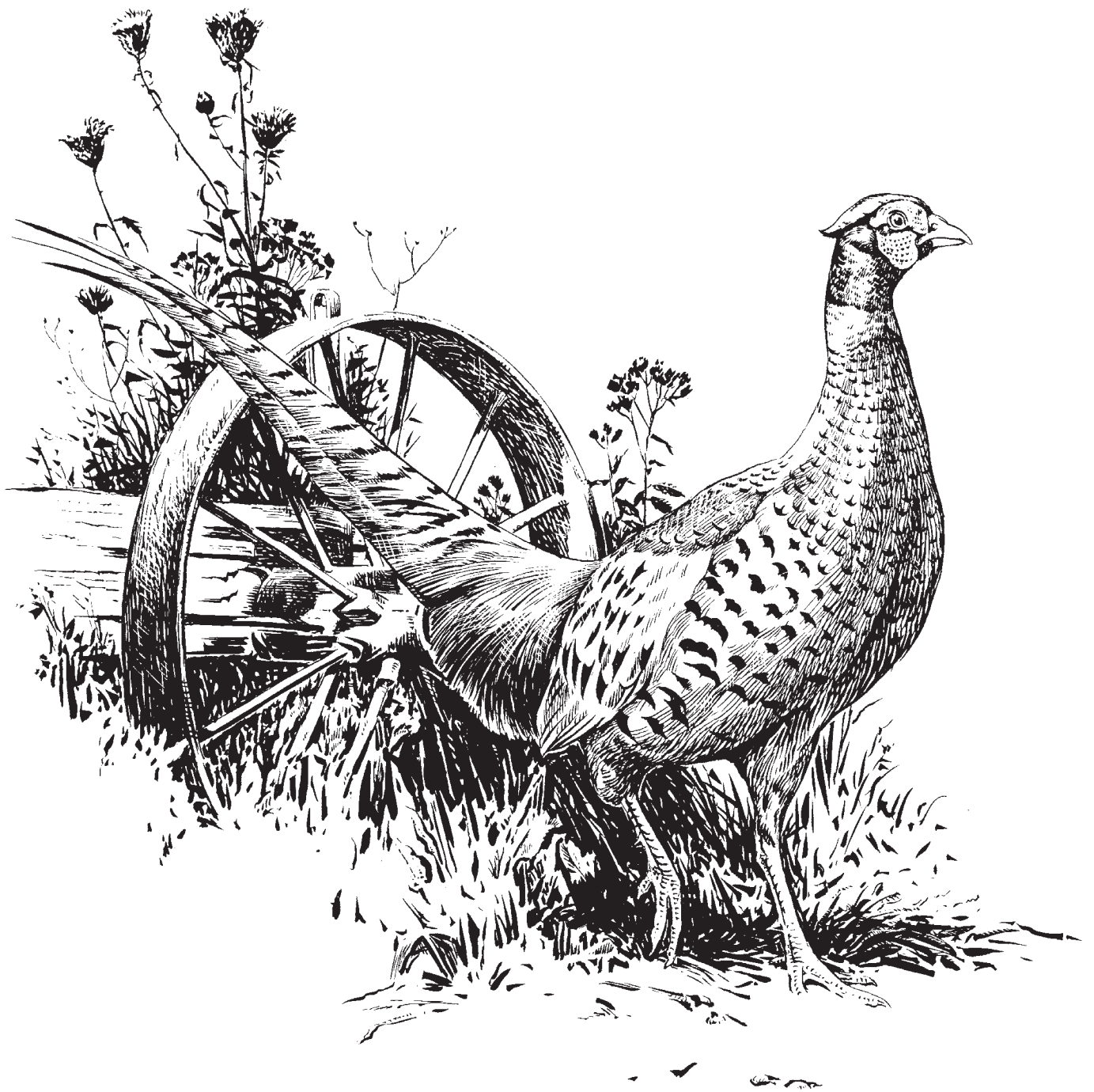
**Hunter Education**—Hunter-education certification is required for purchasing any type of Missouri firearm-hunting permit for people born on or after Jan. 1, 1967 (except the youth deer-and-turkey hunting permit). Conservation agents work with Outreach and Education Division personnel and approximately 2,000 volunteer instructors to coordinate hunter education courses in all 114 Missouri counties. Protection Division personnel also are heavily involved in investigating every hunting incident in the state.

**Hunting Method Exemption Program**—The Hunting Method Exemption program provides special exemptions to physically disabled people by allowing them to hunt and take wildlife by methods not otherwise legally permitted. During FY10, 3,721 hunter method exemptions were approved.

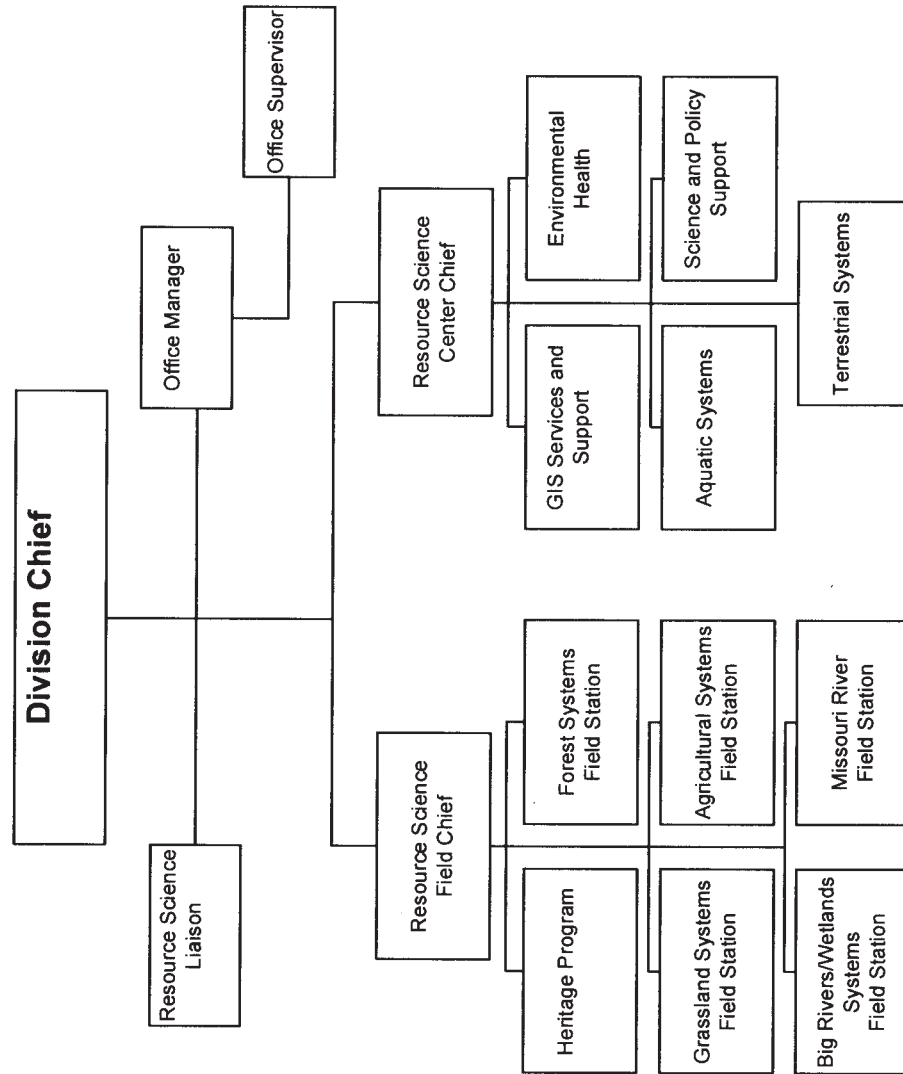
**Group Fishing Permit Exemptions**—Protection Division administers permit-exemption authorizations to supervised groups involved in rehabilitation programs or groups of hospital patients or people with disabilities under therapy or for educational purposes. During this past fiscal year, 385 group-fishing permits were issued for outings—providing fishing experiences to people who otherwise may not be able to participate in outdoor fishing activities.

**Share the Harvest**—Conservation agents and the Conservation Federation of Missouri coordinate the Share the Harvest program, in which hunters may donate deer meat to those in need through established charitable organizations. During FY10, approximately 4,450 hunters donated 205,153 pounds of venison to needy Missourians. Since the inception of the program, nearly 1.9 million pounds of deer meat have been donated to Missouri citizens. Hunters donating venison to the program pay for the processing and tell the processor how many pounds of meat they want to donate. Hunters who wish to donate their entire deer may receive a \$40 reduction in the price of processing, which is paid to the processor by the Missouri Conservation Federation. In some cases, local organizations provide additional funds for processing so there is no cost to hunters who wish to donate deer.





# Resource Science Division



# Resource Science Division

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**Mission:** *Provide the science-based information needed to conserve, appreciate and effectively manage the living resources of Missouri.*

## Goals

Natural-resource management is based on sound biological, geographical and sociological information. An objective to establish a nationally recognized, science-based model for conservation will be accomplished by:

- Ensuring ongoing development of a comprehensive and integrated understanding of Missouri's living resources and their values to society
- Using accumulated knowledge to inform and recommend conservation actions
- Evaluating the biological and social impacts of conservation actions
- Reporting emerging knowledge of Missouri's living resources

An integrated focus in Resource Science Division is organized around six integrated units and functions rather than traditional disciplines, and is dedicated to delivery of management assistance through five field stations; this approach was the basis for the following organizational units within the division (see organizational chart):

**Terrestrial Systems** scientists strive to understand plant and animal habitat relationships, monitor population status and develop harvest and species-management recommendations. Staff is regularly involved with specialized projects to monitor wildlife, plant diversity, population changes and forest silviculture.

**Aquatic and Wetland Systems** scientists conduct research and surveys that focus on issues involving fisheries management, wetland and waterfowl management, fish communities, watersheds, stream-riparian-floodplain systems, reservoirs, in-stream flow and interactions among predators and prey and species of concern. Harvest-management recommendations for statewide fish populations, waterfowl and other migratory birds are developed by this group.

**Science and Policy Support** staff works to link and improve access to databases which document Missouri's rich biodiversity through a web-based archival and retrieval system. Post-season harvest hunter and angler surveys, attitude surveys and public-use surveys are conducted to better understand the opinions and attitudes of Missourians and to ensure that human-dimensions information is integrated with biological information to inform management decisions. Natural-resource economics data are collected in conjunction with the public use-and-attitude information. Biometricians ensure statistically sound study designs and the use of appropriate statistical techniques to analyze and interpret complex natural-resources questions.

**Geographic Information Systems (GIS)** will continue to play an ever-increasing role in natural-resources management, planning and evaluation. The goal of the GIS program is to fully use geospatial technology and products to support natural-resource decisions, archive the processes and evaluate the results. The GIS program supports more than 300 ArcInfo and ArcView users. Monthly training courses are conducted to help train new ArcView users and improve the skills of existing users.

The **Environmental Health** unit primarily provides the services that ensure monitoring and protection of Missouri's forest, fish and wildlife resources. Primary functions include protecting aquatic biodiversity such as mussel conservation and genetics research, water quality, forest health, and providing responsive service to agency staff, the public and other agencies and entities. Staff coordinates pollution and fish-kill investigations with the Department of Natural Resources, and monitors contaminants in fish with the Department of Health.

The **Heritage Program** unit provides expertise and location information to MDC, its partners and the public on plants, reptiles and amphibians, karst communities, mammals and species of conservation concern. Our vehicles are workshops, publications, personal contact and Missouri's Natural Heritage program. Through this program, the status and presence of 1,116 species of conservation concern and natural communities are tracked. Scientists survey for species presence and population trends, develop life-history information, and make management evaluations. Staff ensure accurate documentation and archiving of occurrences of species of conservation concern and natural communities that can be used for regulation purposes and management.

The **Field Unit of Resource Science Division** is leading regional management evaluations by developing protocols and study designs with the goal of "learning by doing." Field stations, actively integrated with the division's centralized functions, focus on improving understanding of ecological systems, functions and processes by working with regional staff throughout the state.

- 1) The **Grasslands Systems Field Station in Clinton** focuses on ecological processes and management implications for cool- and warm-season grass pastures and hay lands, native prairie, savannas and glades and grassland-associated fish, invertebrate, wildlife species of conservation concern and all streams and impoundments fed by grassland watersheds.
- 2) The **Forest Systems Field Station in West Plains** focuses on ecological processes and management implications for upland forests, glades, savannas, springs, karst, fens and cold- and warm-water streams and impoundments drained by forested watersheds and management of forest-associated fish, invertebrate and wildlife species of conservation concern.
- 3) The **Big Rivers and Wetlands Systems Field Station in Jackson and Puxico** focuses on Missouri's large rivers and associated floodplains to understand landscape-level ecological processes. Staff develops tools and strategies to improve channel and floodplain habitats, bottomland forests and wetlands for fish, invertebrate and wildlife communities including species of conservation concern.
- 4) The **Agricultural Systems Field Station in Kirksville** emphasizes annually cropped lands that produce cereal grains, oil crops, crops for human consumption and annually planted livestock forages. Also included in the field station's focus are retired crop lands including CRP plantings, cool-season grass pastures and old fields, concentrated-livestock operations and streams and impoundments drained by agricultural watersheds, and management for agriculturally associated fish, invertebrate and wildlife species of conservation concern.
- 5) The **Missouri River Field Station in Chillicothe** focuses on issues directly related to management of the Missouri River. Many aspects of large-river ecology will be addressed by the Big Rivers and Wetlands Field Station, including some important to the Missouri River. However, several active restoration and recovery programs are being conducted along the Missouri River, and this field station will bring a focused and coordinated monitoring approach among agencies to help clarify the success of these activities.

## Programs

**Population management**—Manage for, and when feasible, restore viable populations of plants, fish and wildlife compatible with the ecological capability of the land and balanced with the desires of resource users and the public.

Resource Science Division identifies priority population management challenges and develops recommendations, in collaboration with resource divisions, to manage harvested species, species of concern and invasive species.

**Ecological processes**—Increase our understanding of the processes that determine habitat conditions for native and introduced animals and plants.

Erosion and deposition through water, wind and fire are the natural disturbance and renewal processes that are essential to maintaining healthy systems and functions. The division focuses investigations on how to effectively re-establish or mimic these processes in Missouri's contemporary landscape to ensure restoration and management of plant and animal communities.



**Management evaluation**—Ensure that results of management and policy actions are measured and appropriately linked to resource-related outcomes, budgets and staff time.

Ongoing evaluation of resource responses and resource uses are essential to determine whether goals are met and to understand when change is needed. Resource Science Division promotes “learning by doing” to improve resource-management programs and to ensure accountability of staff and budget resources.

**Human dimensions**—Provide and promote the use of human-dimensions information in the management decision process.

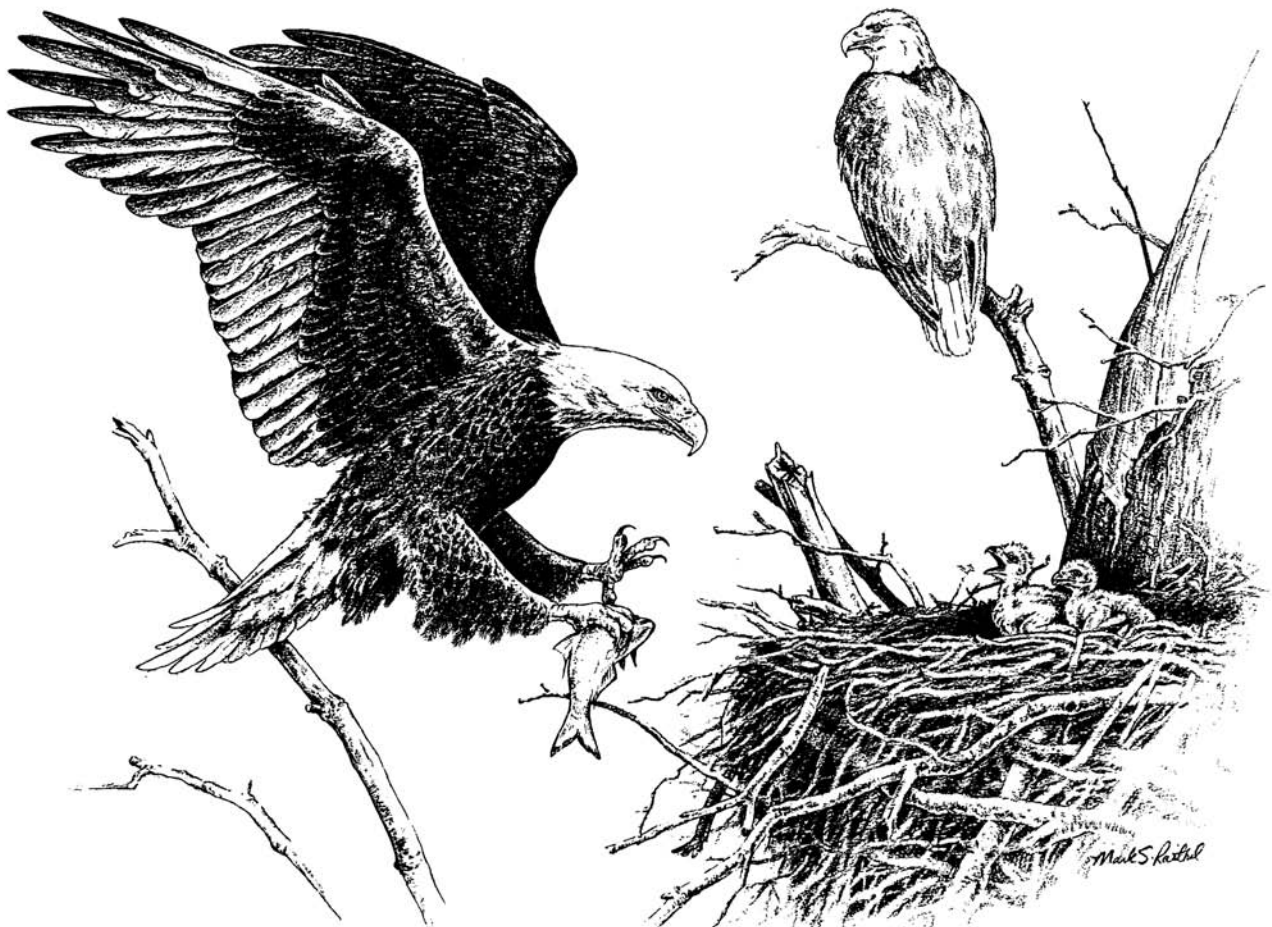
Resource Science Division collaborates with other divisions to ensure that human-dimensions information is acquired and used in policy and management decisions. This information is used to track changing public expectations, anticipate demographic trends, and ultimately provide the information needed to make sound resource policy and management decisions.

**Large-scale planning**—Ensure that all planning and program efforts are based on sound science and include evaluation measures.

Advances in Geographic Information Systems and associated ecological and geospatial applications (e.g., Ecological Classification Systems) are used to inventory, assess and monitor resource condition and management results at national, state, regional and area scales.

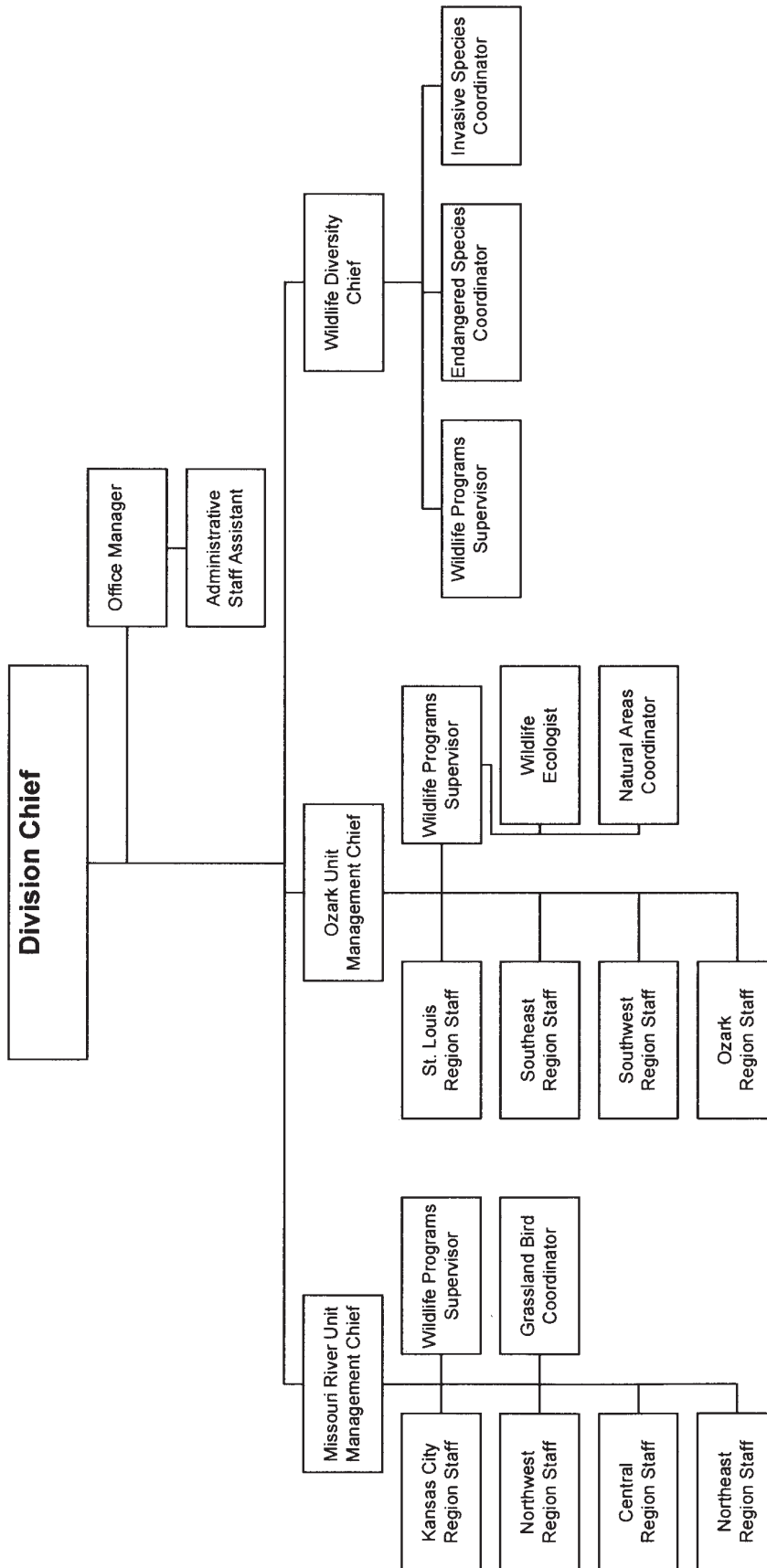
**Information transfer**—Manage, share and transfer data collected in a useful, archival and easily obtainable format.

The division ensures that information about resource investigations, population status, harvest and public use is timely, current, accurate and available in a form that is useful.





# Wildlife Division



# Wildlife Division

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**Mission:** *To conserve for public benefit Missouri's wildlife resources and the landscapes on which wildlife depend, and to manage public lands to conserve and enhance their natural resources, provide vital ecosystem services, and invite public use and enjoyment.*

## Goals

- Balance wildlife resource needs with public expectations
- Advocate wildlife and biological diversity in conservation efforts
- Actively seek ways to inform peers, cooperators and citizens about wildlife stewardship
- Provide opportunity for all citizens to use, enjoy and learn about wildlife and their habitats
- Manage conservation areas that provide opportunities for citizens to recreate and enjoy the outdoors

**Programs:** Wildlife Division is responsible for the management of Missouri's wildlife resources and the habitats upon which they depend to best serve the long-term interests of the people of the state. Fulfilling this role involves a wide range of programs and activities on public, as well as private, land.

## Strive for wildlife diversity through natural community management/restoration on MDC lands

- Manage MDC's Wildlife Diversity program in a way that benefits the full range of MDC programs and Missouri landscapes
- Continue support of the Missouri Natural Areas program
- Continue to coordinate MDC's endangered species program
- Restore natural communities on MDC lands, especially native grasslands and wetlands
- Continue a renewed focus on the "active management" of wildlife habitats and plant/animal communities on MDC lands
- Ensure that aquatic species are profiled in agency wildlife diversity efforts, especially the State Wildlife Grant and Landowner Incentive programs
- Implement the directions outlined in MDC's Strategic Guidance for Northern Bobwhite Quail Recovery
- Implement management programs on conservation lands that feature priority focus areas for bird conservation as outlined in Partners in Flight, Joint Venture plans, and Important Bird Area recommendations

## Develop and strengthen effective conservation partnerships

- Administer Missouri's Comprehensive Wildlife Strategy, an approach to conservation planning and implementation within a framework of partnerships to integrate conservation action for all wildlife statewide
- Administer state wildlife grants to improve opportunities for MDC to work with conservation partners to conserve species with the greatest conservation needs
- Continue to promote all-bird conservation in Missouri through participation in the Missouri Bird Conservation Initiative, within the framework of 55 organizations and private-citizen partners
- Through the Golden Anniversary Wetlands Initiative, assemble the conservation partnerships necessary to secure grants and other funding for rehabilitation of wetland-management structures on the oldest wetland-management areas
- Form partnerships with landowners for wildlife stewardship on private land through the Landowner Incentive program and provide technical support through personal landowner contacts
- Continue to focus on grassland birds, especially prairie chickens, to enhance existing and future partnerships with communities near their habitat

## **Coordinate MDC invasive-species activities in conjunction with other affected/involved divisions**

- Integrate the coordination of invasive/exotic species control into agency and Wildlife Diversity programs
- Control invasive/exotic species on conservation lands, especially in natural communities, while taking actions where appropriate to control the introduction of new invasive/exotic species to MDC lands

## **Public Resources Management—MDC area facilities/infrastructures maintained and operated in a way that invites public use**

- Ensure that conservation area facilities are clean and operated in ways that welcome citizen visitors to the areas
- Maintain infrastructures of all types in ways that enable them to meet their use expectations
- Administer the Wildlife Restoration Grant in ways that provide federal support for operations, maintenance, habitat management and resource planning on conservation lands
- Develop mourning-dove habitats as a means to attract doves and hunters to MDC lands
- Provide special recreational opportunities through deer, dove, turkey and waterfowl managed hunts

## **Deer populations balanced with the interest and tolerance of landowners, hunters and the general public**

- Manage conservation area deer-hunting programs in ways that provide a range of hunting opportunities for deer hunters as outlined in the deer strategic-direction statement
- Ensure that deer populations on conservation areas do not create problems for neighbors
- Assist private landowners with deer-harvest management programs on private lands

## **Manage forests on MDC lands that promote forest health, sustainable wood products, wildlife habitat and ecosystem restoration**

- Continue efforts to assist Forestry Division staff in the attainment of agency timber-management objectives
- Actively pursue opportunities to use timber harvests as a means to attain natural-community restoration objectives, especially for woodlands, savannas, glades and prairies
- Assist Forestry in natural area management activities, such as prescribed burning, on Forestry areas

# Conservation by the Numbers

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- ▲ Actual Funds Available and Disbursements
- ▲ Number of Deer Harvested by County
- ▲ Number of Turkeys Harvested by County
- ▲ Acres of Conservation Land by County
- ▲ Payment In-lieu of Taxes (PILT) by County
- ▲ County Aid Road Trust (CART) Program
- ▲ Capital Improvement Projects Funding by County
- ▲ Number of Deer and Turkey Permit Holders by County of Residence
- ▲ Number of Fishing Permit Holders by County of Residence
- ▲ Number of Small Game Permit Holders by County of Residence
- ▲ Number of Landowner Deer Permit Holders by County of Residence
- ▲ Number of Landowner Turkey Permit Holders by County of Residence

# MISSOURI DEPARTMENT OF CONSERVATION

Actual Funds Available and Disbursements  
For Fiscal Year 2010

## **RECEIPTS**

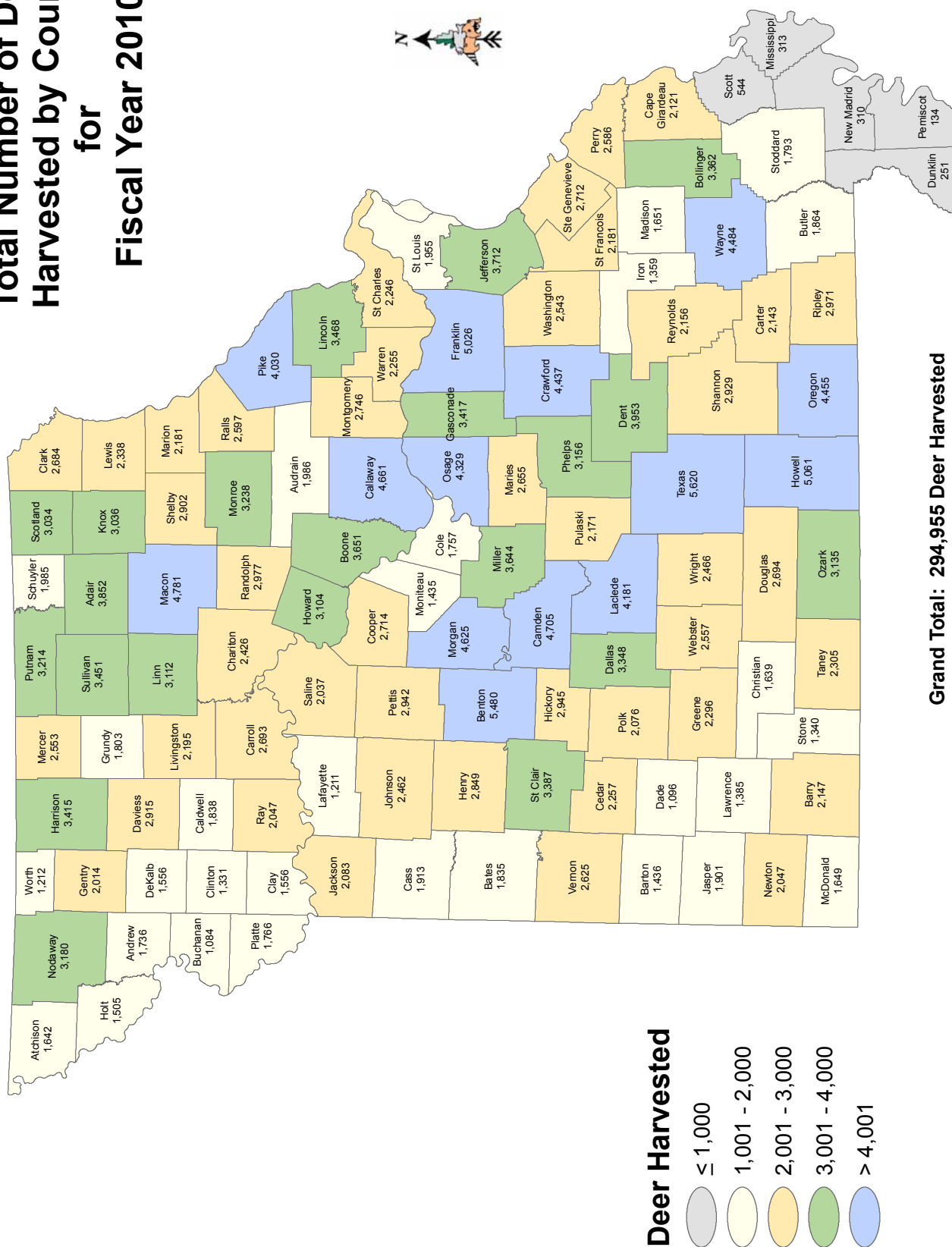
Sales Tax	\$93,854,189
Hunting, Fishing & Commercial Permit Sales	31,059,872
Federal Reimbursements	21,475,595
Agricultural Sales	2,007,391
Timber Sales	2,321,506
Other Miscellaneous Receipts	1,604,694
Miscellaneous Fees & Tags	1,457,207
Surplus Property	816,532
Interest	512,826
Publication Sales	709,032
Nursery Stock Sales	908,621
Grants, Gifts, Bequests & Donations	17,758
Contractual Services	321,429
Rentals	38,747
Miscellaneous Sales	132,353
Land Sales	99,950
Yield Tax & Other taxes	2,631
Refunds	411,695
Damage Reimbursements	44,521
Concession Income	13,169
<b>TOTAL RECEIPTS</b>	<b><u>\$157,809,718</u></b>

## **DISBURSEMENTS**

County Assistance Payments	1,476,299
Capital Improvements	18,865,390
Fisheries	12,712,809
Forestry	16,158,171
Wildlife	16,953,315
Outreach & Education	14,796,239
Private Land Services	6,658,121
Protection	14,845,064
Resource Science	11,455,046
Regional Public Contact Offices	2,911,354
Administrative Services and Human Resources	26,582,346
Design & Development	11,757,655
Administration	4,157,143
<b>TOTAL DISBURSEMENTS</b>	<b><u>\$159,328,952</u></b>



# Total Number of Deer Harvested by County for Fiscal Year 2010

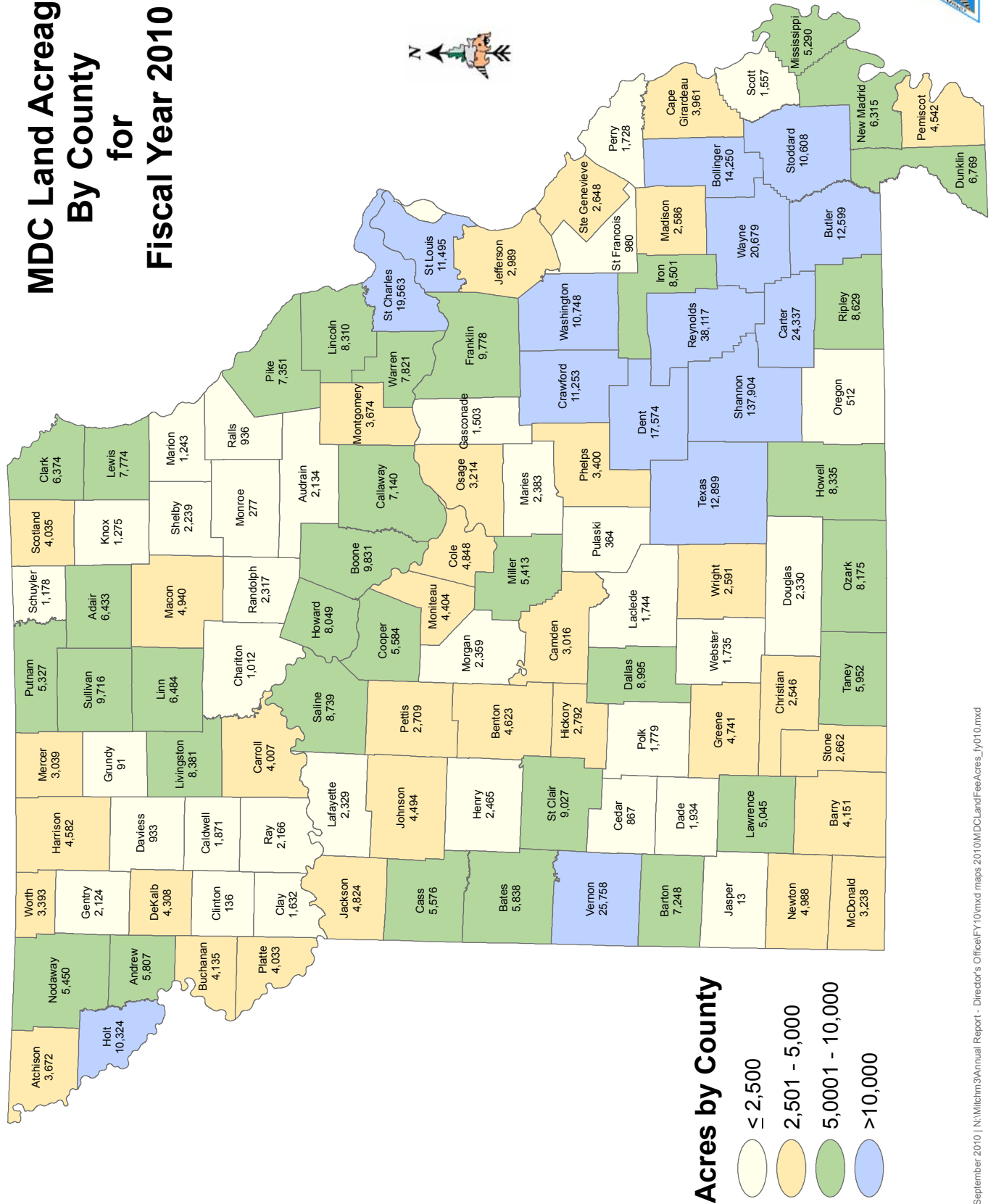


**Grand Total: 294,955 Deer Harvested**

## Fiscal Year 2010

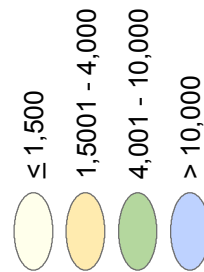


# MDC Land Acreage By County for Fiscal Year 2010





## Payments by County





Established in 1983, this program allows for cost share (usually 50% with a county's match being in-kind services) of roadway maintenance with counties and other neighboring landowners. The focus of the program is to help ensure area roads are properly maintained and the public has adequate access to Conservation Areas.

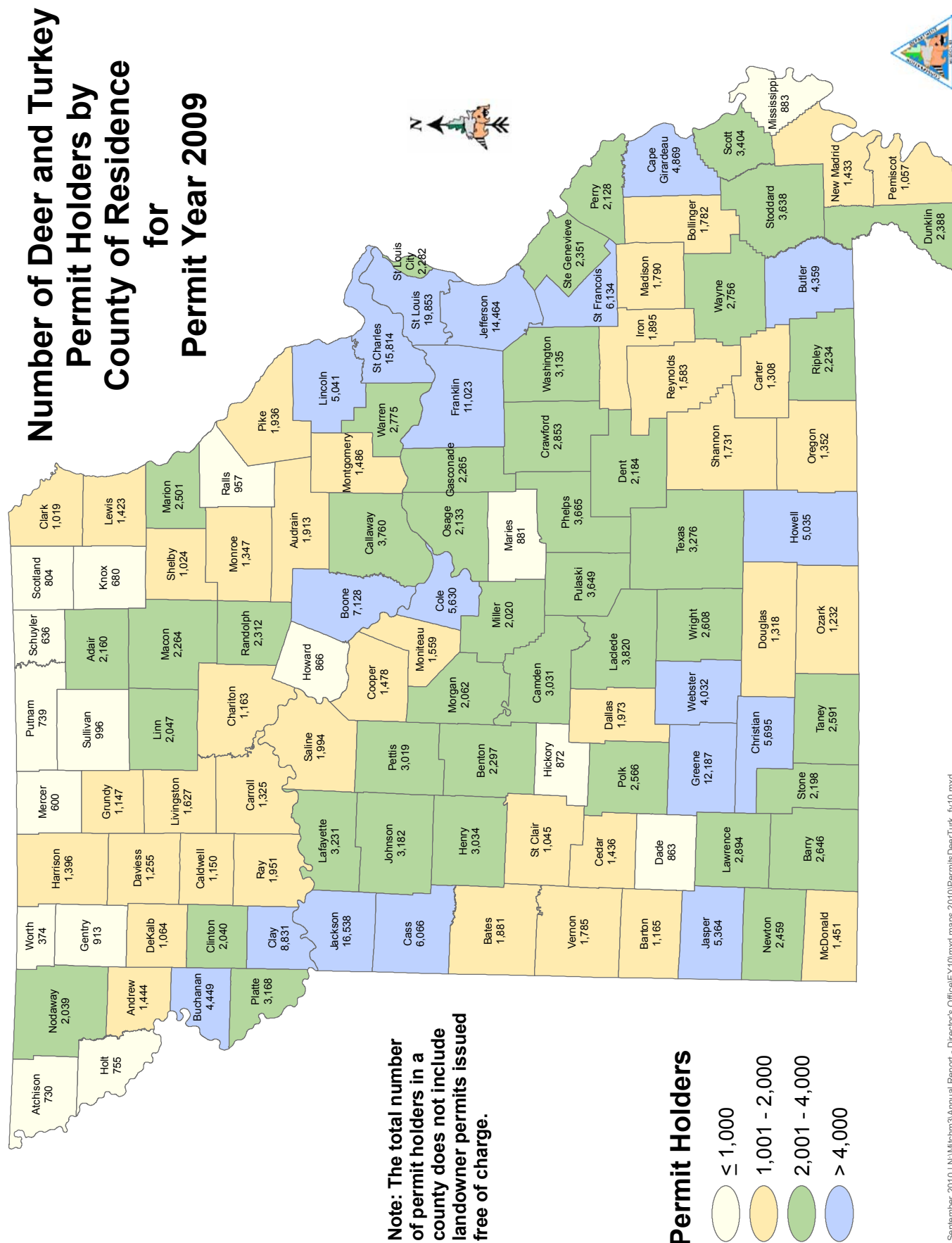






86 2009–2010 MDC Annual Report

# Number of Deer and Turkey Permit Holders by County of Residence for Permit Year 2009



September 2010 | N:\Mitchm3\Annual Report - Director's Office\FY10\mxd maps 2010\PermitsDeerTurk\_fy10.mxd

## Permit Year 2009















Excellent public service is  
what we will provide.

Employees are  
the Department's most  
important resource.



All citizens are important;  
we value their trust and  
their point of view.

Fairness, objectivity, sound science,  
integrity and accountability will  
guide our actions.

Missourians are our  
partners to achieve  
conservation success.